Gleanings in Bee Culture

Created to help beekeepers succeed

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My First Experience in Beekeeping

By Benj. C. Davis, Eden, N. Y.

When I got out of the Army after the war, I was completely cured of any wanderlust I ever had. I knew just what I wanted. Like thousands of other veterans of war-torn battle fields, I wanted a job, then a home in the country—a small piece of land for a garden and room for our two children to play. After three years of country life, we are well settled on our acre.

I guess the bee fever struck me late last summer when our little boy discovered a colony of bees in an old hollow apple tree just over our line on the neighbor's field. Benny came running in one day to tell his mother that the tree was buzzing inside. Mother sent me down to investigate. Sure enough, the tree gave off a steady hum made by thousands of moving bee wings.

We became so interested in this newly discovered realm of insect life, that we wanted to move the bees from the tree to a hive and keep them for our own. None of the bee books we had could tell us how to remove a colony of bees from a tree. I had accumulated quite a fund of beekeeping information after we "struck honey", but this particular problem had no solution in any of of my books. Seemed best to leave them alone. Nevertheless, we spent many long winter evenings discussing the pros and cons of salvaging the bees little Benny first heard working in the tree.

We Lost the Bee Tree

The question was solved abruptly for us one cold day in February when the neighbor had a bulldozer clear his land of old trees. The bee tree was hauled away and we never saw it again. The bees were gone—but our enthusiasm to keep some bees of our own was here to stay. The bee reading went on and on and I got a new hive and painted it white along with two supers. Bee veil, gloves, smoker, and frames with wax were accumulated in anticipation of spring and beekeeping time.

It seemed to me that the writers of bee books and articles in the journals were divided pretty evenly in regard to the advantages of starting with package bees, or a wintered-over colony. I decided on the latter thinking that I could save a swarm or divide the colony as well as enjoy a little surplus honey. I couldn't forsee at this early date that the experience I would have in handling such a project would be another advantage in selecting a full colony over package bees. I was to receive a thorough initiation in beekeeping!

As soon as the weather became warm enough for bees to fly, I began visiting beekeepers far and near but none were willing to part with

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wintered-over colonies. One small apiary which was for sale contained so many badly conditioned old hives, some of them clogged with dead bees, that I gave up trying to decide for myself what and where to buy and went to a reliable man for a recommendation. That man was the state bee inspector who lives several miles from me. I spent a whole evening talking to him. He not only directed me to the owner of the bees I have now, recommending them as disease-free, but he gave me many fine pointers and recounted several of his experiences all of which made me feel more confident and in the bee know-how.

I lost no time locating the owner of the bees I wanted to buy. The owner was the widow of the beekeeper who had died over a year ago leaving his apiary to fend for itself. Neither this lady nor anyone she knew wanted anything to do with bees. She told me to take my pick of the hives and then she called the man who owned the large orchard in which the apiary was located and told him to expect me.

I Prepare for the Worst

Suspense made me jittery as I got into bee veil, coveralls, gloves, and boots laced tightly over pant legs. My wife said I was a sight indeed to anyone but a beekeeper. Before I left home, I made what we had called in the Army, a "dry run". I went over and over every step I would make in the actual removal of the hives to their new home. I tried to anticipate every emergency and prepare for it.

When I reached the orchard, I talked briefly with the owner. He told me how to get back in the orchard and said he never went near the apiary and didn't intend to. It struck me quite distinctly that the world was made up of two kinds of people: Those who kept bees and those who did not!

As I drove through the immense orchard to the spot where the apiary was located, the sun was just setting. When I reached the hives, the air was alive with bees. I drove as near as possible and walked through the hives trying to decide which hive to take. Some of the hives had blown over leaving the robbed-out combs exposed. Some had been wrapped in tar paper with extra packing of leaves in the top with a small bee entrance at the bottom. Colonies that came through the winter with no packing of any kind and with upper entrances were by far the strongest, judging by the number of bees working them. There was one colony which stood off by itself which was four deep supers high. There were three-quarter inch holes in each super as well as the regular entrance at the bottom. The bees were using all of these openings, crowding and pushing over each other to get in and out. This was the colony I decided to take.

Suddenly my confidence, largely the growth of ignorance and an over-abundance of enthusiasm, dissolved and left me standing uncertain and scared. How was I to get that four foot tall structure of seething bees into the car? I had already been discovered by the guards and they were flying angrily around my veil.

My hands were shaking as I got out some screen and tin snips and started cutting squares of screen to cover the openings and to put over the top of the bottom two hives when I separated them to move. Even if I'd had a truck I couldn't have loaded the whole thing at once. Already I was wishing I had started with package bees!

I got the smoker going good and puffed it into the entrances as the books said. Sure enough, a loud roaring noise followed the smoke treatment. I placed an extra hive cover I had brought with me on the ground upside down by the hives. Then, with hive tool, I separated the two top supers from the bottom two supers. I lifted them down into the inverted hive cover. I grabbed the screen I had cut to nail it in place on top of the remaining two supers but the open hive was boiling over with a tumbling mass of surprised and angry bees. I tried to brush them off with a handful of long grass, but that didn't work.

They Attacked Me in Close Formation

The smoker had gone out and was worthless to me. Fumbling with the clumsy bee gloves on my hands, and the veil and extra clothing dragging my every move, I laid the screen on top of the bees and tried to drive a nail through the screen into the hive body. The nail head, the hammer, everything was covered with crawling bees. The first wave hit home on me then, too. They went to work on my hands as though the gloves were made of tissue paper. A couple or

so worked their way into my coveralls and I could feel them crawling around on my legs. Desperate, I felt that the situation was completely out of control. Withdrawing to a safer distance, I tried to ignore the bees which followed me, and looked for the ones inside my clothing. I got them out and noticed too late that there were openings on both side-pockets of my coveralls.

It was dark when I turned back to the hives. I lit the smoker again and turned the car lights on my hive. I lifted the two sets of hives and edged and worked them into the back of the car. A bottom board came loose and bees poured out into the car. I closed the doors and windows in the car and drove out of the orchard past the farmer's house with bees swirling and zooming around me thicker than hailstones. Gradually, as the car traveled down the road home, the motion seemed to pacify the little demons and when I reached my door, there wasn't a bee on the wing. I hadn't been stung once during the ride home.

I removed the hives from the car and placed them on the new hive stand, four deep as they had been. The dozens of large and small clusters inside the car and on the ground nearby, I tried brushing onto a dustpan and dropping in front of the hive entrance. This didn't work very well, so I left the scattered and confused little bees to themselves, car doors open so that they could leave the car when they found their bearings in the daylight.

Bees Settled Down Next Morning

That is just what they did, as I discovered next morning. The night had been warm and at sun up, all the bees had returned to the hives as though a fairy had waved her magic wand and transferred them from car and grass to safety. Both my wife and I felt a reverent respect for these little creatures and were thankful that they could adjust themselves after the strenuous upheaval of the night before.

After several days two new queens came in the mail. There were some black bees in my colony and I wanted to re-stock with pure bred Italians. I gave a top and bottom to the two top supers which were full of brood and bees and placed them on a new stand. Then I tore off the cardboard on the queen cage and left it on top of the frames. In the remaining two hive bodies, I found the old queen. She was twice as large as my new queens. I destroyed her and put the new one in the hive.

A week later, I opened the hives. Both queens had been released. There were several dead bees in the queen cage. I couldn't tell if the new queens were accepted, but the bees were busy working and seemed to be well established.

Texas Beekeepers

Left to right: W. O. Victor, Uvalde; A. W. Bulay, Dayton; L. R. Nolan, Corsicana.—Photo taken by D. C. Babcock at the Texas State Beekeepers' meeting in October, 1951.

Beekeeping in Cyprus

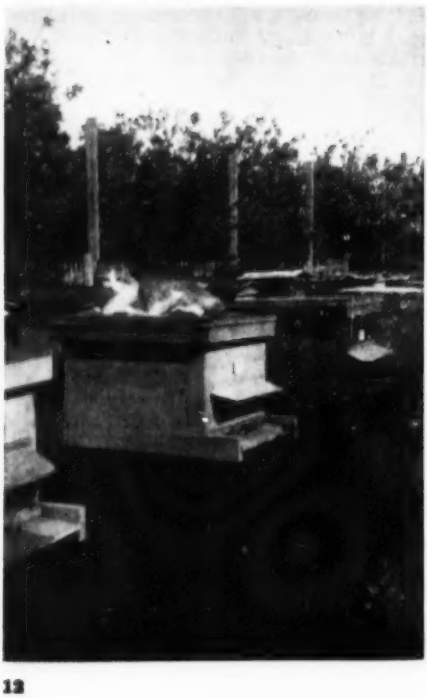
By George P. Georghiou

[Speech given before the 83rd Annual Meeting of the Empire State Honey Producers' Association, November 25, 1950 in Syracuse. Mr. Georghiou, a native of Cyprus, is now specializing in beekeeping at Cornell University, Ithaca, N. Y.—Ed.]

A few years ago I happened to come across a story by Conan Doyle named "Cyprian Bees". It's a murder story. The murderers were using Cyprian bees to kill their victims. Most of you have heard in one way or another about the Cyprian bees and no doubt you are aware of the common belief that these bees are very vicious. Therefore, I imagine that the first question that comes to your mind is whether these bees are actually as mean as they are thought to be.

I have worked with Cyprian bees on the Island of Cyprus for over 12 years and what I have to say is that during those 12 years I have received less stings than I did during the summer of 1949 when I was working with Italian bees in the State of

In Cyprus, we like to have our apiaries well kept.



New York. There is one difference between the Cyprian and the Italian bees: The Cyprians always caution you to beware. If they are to get excited, before they start attacking you, they will land on your hands as if they want to tell you to be careful. One sudden move of your hands, a kick on the hive or any other disturbance will be enough to start their attack. The Italians won't give you any warning. They seldom get excited, but, when they do, they'll start on you no matter whether you are prepared for them or not. Another warning that the Cyprians give, is a characteristic sound, which an American beekeeper once described as "the sound of meat in the frying pan." Many a time this sound has made my hair stand up on edge, but at least it was a fair warning.

Our cat enjoys a December sunbath on top of a hive. Once in a while the bees bother her, but she soon forgets about it and returns. Fifty-percent of our honey comes from citrus. The orange trees in the background offer also excellent wind protection.

Anyway, the fact remains that the Cyprian bees are vicious. Even if they may give you a warning, they are frequently gentle enough to be handled easily whenever the beekeeper wishes, especially by the big beekeepers who need stocks that can be handled at any time and under all kinds of weather.

Meanness of Cyprians Exaggerated

At this point, I want to emphasize that the meanness of the Cyprian bees has been exaggerated in foreign countries. Glancing through the literature of the last century, when the Cyprians were considered as the most promising race, and were imported into this country, to Canada and to Europe, I did not fail to notice the beautiful words with which beekeepers praised the laboriousness and the beauty of the Cyprian bees. Those words were based on the

Part of our home yard. The hives are standing on cement blocks, that keep weeds low. The hive stands are treated with crude oil to prevent ants from climbing up.

first impressions that the pure Cyprian bees created in the foreign countries. It seems that since then, crosses with other races have produced more vicious strains in these countries, and this, plus the lack of knowledge on how to handle these strains, caused many beekeepers to become discouraged and condemn the Cyprians. On the Island of Cyprus,

One of our outyards. Wild thyme and sage are the main sources of nectar in this area. The yard is fenced with barbed wire to prevent stray goats approaching the hives.

however, the Cyprian bees have remained pure, beekeepers know how to handle them, and have never had the desire to switch to any other race.

Why are the Cyprians so mean, and why are they desirable on the island of Cyprus? The climate of Cyprus is dry, rain falls only during the winter and the summers are warm and dry. While during the winter there is abundant pollen available and in the spring lots of nectar from citrus and other plants, there

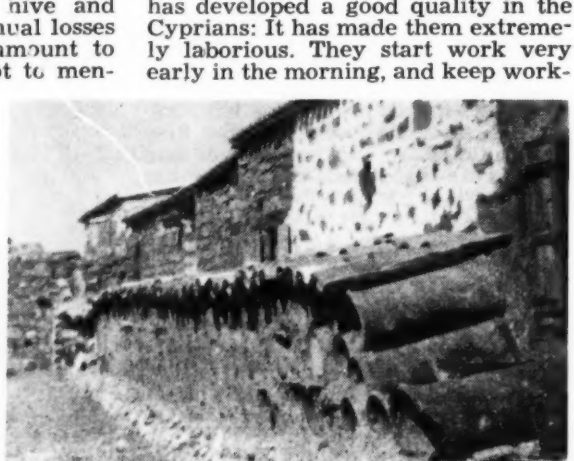
Establishing a new outyard. Note cement blocks on covers and also "sun visors" above the entrances. Even though the hills are dry during the summer, thyme blooms profusely in June and July.

A pile of o'd-fashioned barrel-shaped clay hives. Note small entrances in front of each hive.

is little or nothing coming in during the summer, and the bees have to make long trips to find a load of nectar.

They also have to face numerous enemies. The ants are plentiful, so is the wax-moth; but a big red hornet is the greatest enemy of our bees. These hornets are about three times as big as the bees, and they make their nests in the ground. Only the queens overwinter, but they are so productive that by the end of the summer their colonies grow in size tremendously, sometimes reaching over 5000. All this increase has to be made at the expense of other insects, mostly bees, since bees constitute their main source of food. They invade the colonies during the summer and fall, catch bees, and carry them to their nests. When the population of the colony is reduced sufficiently, they enter the hive and feed on the honey. The annual losses caused by these hornets amount to 4 percent or 5 percent, not to mention the great reduction in the population of all colonies. One of the most inspiring examples of bee courage I have ever witnessed, is the resistance of the Cyprian bees toward these hornets. As soon as a hornet lands at the hive's entrance, ten or more guard bees pounce on him, and if he is not fast enough to catch one bee and fly away, he is destined to die by the stings of the Cyprians. Even when there is only one guard bee on the landing board, she will advance alone toward the hornet. her fore legs up, ready to face him.

It is evident from the above that bees living in such an environment and having to face such enemies, have to be vicious if they are to survive. They were not made vicious, but they have developed this quality through natural selection. The scarcity of nectar, on the other hand, has developed a good quality in the Cyprians: It has made them extremely laborious. They start work very early in the morning, and keep work-



An apiary of about 200 colonies. There are a few empty hives at the end. When a swarm is put in, a cover is placed in front with a hole at the lower end to serve as an entrance. These are p'ainly seen in the picture above. The spaces between the cylindrical hives are sealed at both ends with clay leaving the middle empty to serve for heat and co'd insulation.

ing until late in the evening. They are on the wing the year around, even during the cold windy days of January when most insects are inactive.

Today there are about 30,000 colonies of bees on the Island of Cyprus, averaging eight per square mile, in contrast to four per square mile in New York State. These are kept in either old-fashioned clay barrels or in modern hives. The clay barrels are about four feet long by one foot in diameter, and have no movable frames. They are piled one above the other in four or five rows, and are covered with grass, branches, or steel sheets. The combs are cut with a long knife in the fall, but a good supply of honey is always left for overwintering. The annual production of honey in these clay hives does not exceed 25 pounds per colony, and their main disadvantage is that they can be opened only from the back, and so inspection of all the combs is impossible. One of their good features is that they are kept cool during the hot summer days. These clay barrels are used by those farmers who are too busy with other farming occupations and have no time to spend on their bees. The only time they work in the bee yard is in the spring when they are on the watch for swarms and in the fall when they take out the honey. The combs that are taken out of these hives are pressed by hand and strained for one day or two, to remove most of the honey. The combs are then washed with water, and as this water contains a good deal of honey, it is boiled for some time and used for sweets and home pastry.

No honey is thus wasted. The average apiary with these old-fashioned hives contains about 20 colonies, but some have as many as 300, all in one location. Needless to say, most beekeepers are among the wealthiest members of the village. This seems to be true in America also!

The most progressive beekeepers use standard hives, comb foundation, small extractors, some method of swarm control, and can well be compared with the American beekeeper who keeps 50 colonies to show the visitors. Their average production per year is about 60 pounds. In certain sections, as in the citrus and the thyme, the production is much higher.

Our main sources of nectar are

The hiving of a swarm is done by shaking it in the hive and putting the cover back in place. This swarm had settled on a small lemon-tree branch that was placed near the hive from which the swarm issued. If the leaves are crushed between the palms, the odor that is produced attracks the swarm very strongly.

citrus, thyme, sage, and eucalyptus. The citrus honey is delicious and brings a premium price on the market. Our thyme honey has a very good flavor and is quite different from the thyme of Eastern New York. Our thyme belongs to **thymus vulgaris,** while yours belongs to **thymus serpyllum,** a different species.

Catching Swarms

A very interesting method is used by the beekeepers in Cyprus for catching swarms. They have found out that swarms are strongly attracted by the odor of newly-crushed lemon leaves. So those who raise bees in the citrus areas have one or two lemon trees close to their yards, and whenever a swarm comes out they rub between their palms a few of the leaves of the lemon tree. Within a few seconds the swarm settles on those leaves. I have seen or heard of no more satisfactory method for catching a swarm. Since the odor of the crushed lemon leaves persists for one half to one hour, if the beekeeper cannot stay in his yard continuously, he rubs a few lemon leaves and goes away. If a swarm issues during the next one hour or so, it will undoubtedly settle on the lemon tree.

In conclusion, let me summarize some of the facts about the Cyprian bees:

(1) They are disease resistant. There is no American or European

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The Fiddling Beekeeper

By Walter Barth, Ithaca, N. Y.

George Chrysler busy at work on one of his violins.

One rainy summer afternoon I dropped in to see George Chrysler of Scott, N. Y., and to my great surprise I found him in the honey house tuning up a violin. It isn't unusual for a beekeeper to be a proficient violinist, but to make this instrument as well is another matter. George Chrysler has been successfully keeping bees along the shore of Skaneateles Lake for more than 20 years. His claim to success lies in the use of eight-frame equipment and the breeding of a strain of queens whose progeny have become well adapted to local conditions. Incidentally, these bees have brought local fame to the breeder. Knowing this beekeeper to be a vigorous worker, it was strange to see him take time out from bee work and whittle a violin out of a block of wood.

The idea for this interesting hobby first entered George's mind about 1935. Those were the days of low honey prices, too, and although Mr. Chrysler operated 400 colonies of bees at that time, it was difficult to earn a living even if colony production was higher than average. So, using Ed. Heron Allen's book "Violin Making As It Was And Is" (Great Britain 1885) as a guide, this skillful beekeeper set out to make his first musical instrument. The source of his wood was obtained from the back of an old piano, but today George is very particular and uses only well aged maple or spruce. The latter should have aged for at least 18 years.

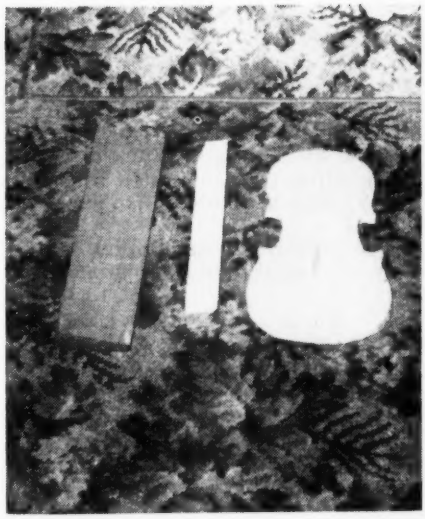
George picked up a piece of maple, and after casually mentioning that it was more than a hundred years old, proceeded to give me a quick demonstration of the entire construction of a violin. To obtain two pieces with the same grain, a slab of maple is sawed in two lengthwise. The two pieces are glued together and the back or belly of the violin makes its appearance. Then with the aid of a pattern the general violin shape is cut. The enclosed pictures show the evolution of the instrument from a block of wood to the finished product.

George was quick to admit that his instruments are copies of famous European models like the Stradivarius. Although the origin of the violin is credited to India, it required the skill and genius of Stradivarius, a violin maker of Cremona, Italy (1644-1737) to create instruments of perfection. The best that can be done today is to imitate a Stradivarius.

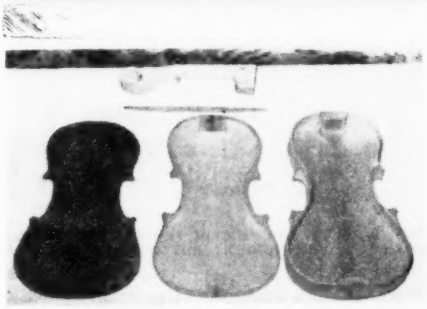
In producing a violin, this skillful beekeeper uses one of his many patterns that are the exact measurements of the many famous makes. Then after considerable effort has been expended on carving and sanding the pieces to the proper thickness, all of the parts are glued together. The glue holding the top of the violin is diluted so that the latter can easily be removed for repairs. The neck and scroll is carved from a separate piece of maple and glued to the body of the violin when it is near completion. Many scrolls that appear on old violins exhibit carvings of a lion or human head but George adheres to the conventional design.

To avoid the shrill or sluggish tones it is essential that the wood be of the same grain, that the "F" open-

ings be of the right length in relation to the size of the instrument, and that the wood should be cut to the correct thickness. The "F" openings are two slits that lie parallel to each other on the belly of the violin and allow for air movement when any of the strings are vibrated by the violin bow. Too large an "F" opening, for example, will result in a "tinny" tone and the reverse will produce a weak tone. If one of the finished violins produces an off tone the whole instrument is scrapped to maintain the high standard of workmanship for which the Fiddling Beekeeper is famous.



Left to right: Raw piece of maple for body of violin. The neck or scroll of violin will be carved from small piece in center. The top of a violin still in the rough is shown on the right.



Cardboard pattern from an "Old Master" on the left. Finished top or belly of violin displayed in the center. On the right can be seen the back or base of the instrument after the ribs or side have been glued in place. A carved scroll and a base bar is exhibited near the upper area of picture.

Many apiarists have claimed that the ancient violin makers of Cremona have used propolis, mixed or pure, as a varnish for their pieces of craftmanship. Mr. Chrysler's experience has caused him to believe otherwise, for he claims that propolis sinks deeply into the wood, plugs up the pores and produces a very poor tone. George brushes a quick-drying lacquer on the bare violin and this dries before much of the wood is penetrated. Thus the pores are closed to the strain and the eight thin coats of violin varnish that must follow. However, each covering applied to the instrument must be well rubbed on so that the coats of varnish are of the proper

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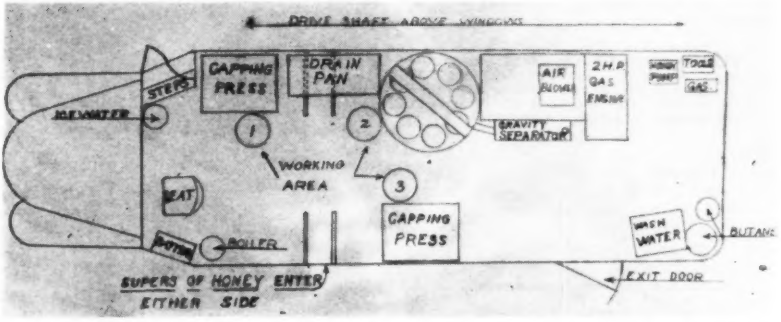
Instrument on left nearing completion lies beside a finished Chrysler violin.

A Converted School Bus

Mr. William C. Miles, San Bernardino, California, bought a used school bus and converted it into an extracting house on wheels. His equipment is all modern and so well arranged that while he has everything he needs there is no feeling of being crowded in the small compact space.

Mr. Miles uses the outfit at San Bernardino where he extracts his orange honey, then goes to the Imperial Valley where he has large apiaries on alfalfa.

The pictures which follow show his equipment, and his legends give a very understandable explanation.



No. 1. This drawing of the plan of layout of the equipment as placed in the school bus shows a well-thought out way to work without any lost motion.

No. 1. The operator at position 1 in the working area uncaps honey, the cappings falling into the capping press. Supers of honey are at his left as he faces the capping press. Uncapped combs are placed in the drain pan at his right.

The operator at position 2 stacks all supers of honey coming in and empty supers returning in addition to operating the extractor. We prefer the supers to come into the bus from the right side under the drain pan. Honey is carried from the yard to the bus on a rubber-tired wheelbarrow, four supers making a load.

Operator 3 uncaps honey from supers at his right, returning the combs uncapped to supers from whence they came. When the extractor is being filled, operator 3 puts the combs he uncapped into the extractor. When operator 2 is stacking honey or returning empty supers of combs, operator 3 runs the extractor. In this way the extractor is never idle.

The gravity separator catches sticks, parts of combs, etc., before the honey reaches the pump.

The air blower produces a strong current of air to cool the bus when needed.

At the end of the day's run, springs are lowered across the capping press, pressure being applied by a long screw. The next morning, the pressed cappings are removed from the press and placed in the solar wax melter. (See picture No. 2.)

Extracting capacity per hour is 20 to 21 5-gallon cans of honey, or 25 to 35 supers of honey.

The bus is on a 1941 International truck chassis. The cost of the bus from the transit company was $600.

The average school bus will not convert satisfactorily because of insufficient ceiling height. This bus has 6'4" clearance on the inside.

Another $800 was spent on inside equipment, etc. In addition to these two items I spent two months making the bus into the portable extracting plant.

There is a 20 ft. hose connected to the honey pump in the rear of the bus. When traveling this hose is put into a 3-in. pipe under the floor of the bus.

The tanks on the trucks are equipped with an electric alarm to indicate when the tanks are full, thus preventing them from running over.

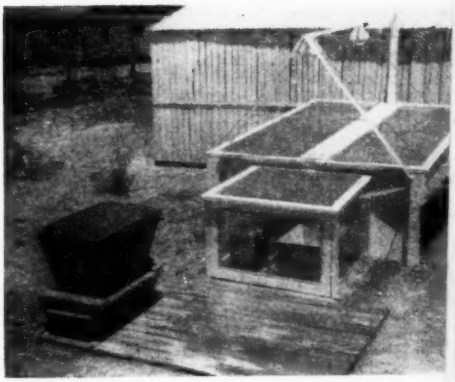
The honey pump is equipped with a clutch, disengaged when there is not sufficient honey to operate the pump to capacity.

A two horse-power gasoline engine furnishes sufficient power for all of the equipment.

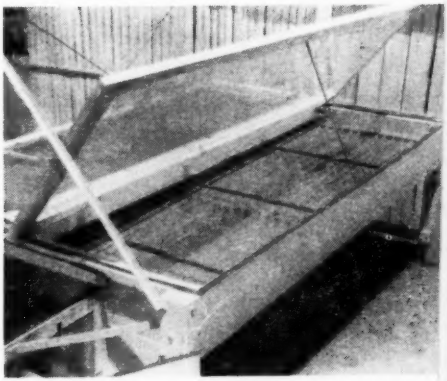
Under the bus there is a 40-gallon tank into which honey drains during the pressing of the cappings. This tank is important. It has a water jacket on the bottom and heat can be applied during cold weather for faster honey pumping. The total capacity is 90 gallons before the extractor reel drags in honey.

While this bus suits me perfectly, it probably might not satisfy the needs of others. In California migratory beekeepers use portable extracting equipment as well as beekeepers who have permanent locations. When the supers are returned to the bees from whence they came, the hazards of American foul brood will be greatly reduced.

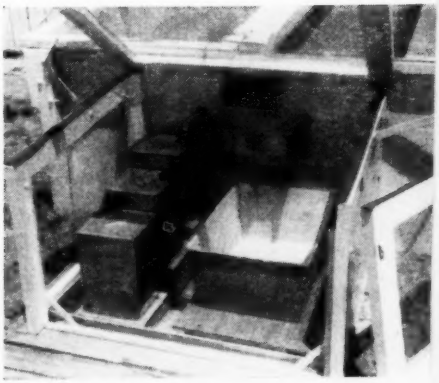
No. 2. The Solar Wax Melter and Slumgum Container.—The pressed cappings are taken from the presses each morning and placed on pieces of burlap 30" square inside the melter. In the evening while the melter is still hot the slumgum is dumped from the burlap into a funnel where it falls into the newspaper lined slumgum box. When the slumgum is cooled, the box is turned over and the slumgum comes out easily covered over by newspaper. Note the three springs over the top of the melter to counter-weight the glass doors. All glass is ¼ inch salvage plate glass. Temperature readings: When it is 110° in the shade, it is 140° in the sun. It is 150° inside the melter (shaded part) and 180° in the melting wax. The melter usually starts to run wax about noon time and finishes in about 4 or 5 hours.

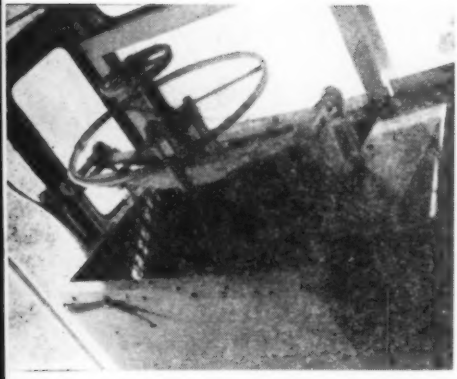


No. 3. Aluminum corrugated metal is used in the bottom of the melter. The three rods across the melter support heavy wire upon which the burlap is laid to support the pressed cappings. The underside is insulated with 2 to 3 inches of insulating material.



No. 4. A gravity separator separates the wax and honey. Honey goes into three cans on the left. The wax flows into a pan which will hold 110 lbs. of wax. Some days this pan is not sufficient to hold all the wax and another pan is placed on top.





No. 5. Capping Press. Overnight is ample time to press cappings. The sides of the presses are lined with burlap which is unhooked at the top and folded over cappings before pressing begins. There is very little honey contained in the cappings. This will vary from 1 to 2 cans of honey from cappings to 100 cans of extracted honey. Sugar in the cappings will account for this variation as well as applied pressure.

No. 6. An electric-powered honey pump conveys honey from the truck tanks to the settling tanks. A one-horse-power motor pump (80 to 100 RPM) has honey capacity of 10 gallons per minute.

No. 7. This is a load of honey going into the bus for extracting. Aluminum shade flaps are raised at the bee yard for ventilation and shade. These are lowered while traveling to exclude the dust of the road.

No. 8. It takes several cars besides the bus to keep the business going.

Two men usually work in the bee yard removing honey by the use of carbolic acid covers.

No. 7.

No. 8.

Guardians of the Apiary

By Major T. H. G. Farnden, Pietermaritzburg, Natal, S. Africa

These hives in North Germany might be likened to our scarecrow.

In many parts of the world beekeeping is still attended by ancient superstitions, many of which date back to early history, when man first began to keep bees in order to add to his meagre larder. It was then popularly believed that success or failure depended largely on one's ability to placate or ward off harmful spirits whose sole object was to reduce the size of the honey crop and attract the swarms away from the hives.

To prevent these evils, most unsavory charms and items of food were put in and around the hives, and more definite forms of opposition, such as casting spells and offering up prayers, were also employed. For the same purpose hives were often painted in hideous "spirit-resisting" hues, and the more imaginative beekeeper would ward off the dreaded spirits by designing some of his hives to the likeness of the face of a human being, animal, or some mythical monster, the mouth being used as the entrance for the bees. Two such hives, which were until comparatively recent years used in a large beekeeping area in Hanover district of North Germany, are seen in the accompanying photograph.

Fooling the Rats

By C. H. Huey, Fitzgerald, Georgia

Around a great many farms and apiaries there is the constant menace of rats and mice—the damage and nuisance is often perplexing. The common complaint is that the rats will not throw the traps or will not eat the bait. I, like most others, have tried many kinds of bait. The kind I like now is to use some cardboard from a common packing box, soaking it in some old dark honey. These pieces can be cut the size you want to use and then soaked. The rats smell them and just love to gnaw them. This may not be a new idea but might be worth trying.

Diary of a Bee

By Constance Carr, Northampton, Mass.

Sept. 1st. Years ago my great grandmother kept a diary way up in Nova Scotia. Those days were really interesting, but I am not so sure about my life story being of any interest to modern drones and workers, but it might happen that a grandchild of mine would alight on an old copy of Gleanings in Bee Culture and derive some fun from it, as I did when I pounced upon an old copy of The Canadian Bee Journal, where my great great grandmother's diary is recorded. I buzzed with pleasure with what I read, but, dear children, don't expect too much, because magazines in general and bee journals in particular are complete failures as sources of nectar, nor do they tell you where to find the first pollen or the last goldenrod! But who am I, only a queen of 1951 to mention failures of an infant magazine, established as recently as 1873? It really does well for such a youngster. You all know that we bees have been carrying on happily and successfully since before the time of the Pharaohs in Egypt, without benefit of books, and those poor dear humans have so much to learn about us, and they actually seem to think it is all in books! However, they are enchanting creatures although sometimes dull and frequently weak in the intellect, when it comes to catching up with us. They are always complaining that we don't do just what the book says, but we of course, never have time to read the A B C and X Y Z of it all, so we shouldn't be blamed for being bee wise and not book wise.

Sept. 2nd. Yesterday being a cold rainy day I had time to start my diary, which begins in the autumn so that I will have time during the cold quiet days of winter to write about the past summer. I have found a few sketches that may interest you, which I will attach with propolis as I go along. It is warming up again and the colony is buzzing with excitement over the news that goldenrod and asters are in full bloom. How grateful we should be because we won't have to exist this winter on sugar syrup alone, as last year. That was really hard going, nasty artificial stuff. You know, girls, it lacks life, its refined, and that is why we don't do as well on syrup alone as when mixed with our beloved nectar and pollen.

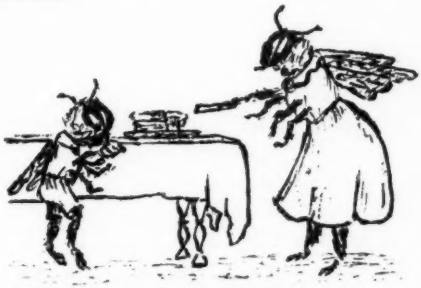
Sept. 3rd. Nectar is pouring in, and my July babies are doing a magnificent job. I only hope they don't wear their wings to tatters, for I hoped to keep them with me all winter. However, August and September babies always winter well, on account of having much rest in the early part of each day, and mother nature sees to it that they are in early in the afternoon by sending an early chill with sundown which chases them home as fast as their wings can go.

Sept. 4th. Over the tea cups my nearest neighbor and I discussed wintering. She feels as I do, that we would rather not be packed. I read her a letter from my cousin in Switzerland who said she never was packed for winter. She lived in a double-walled hive with a peaked roof which shed the snow, and she and her family and all her immediate neighbors came through with flying colors. She sent me a snap of two of her youngest children on their way to school. They look healthy and happy, don't they?

Sept. 15th. No time to write in my diary for days. Weather superb, these days of pure gold cannot be wasted on words. "Deeds not words" should be every bee's motto.

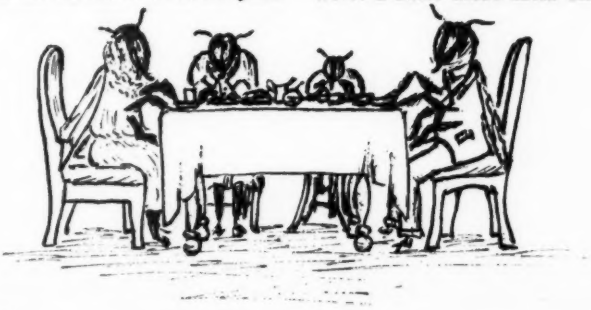
Sept. 25th. I took time out to give a cooking demonstration to some neighboring children. You can't begin too young to teach them the food value of honey, and as you all know, bread and cake keep fresh twice as long and are twice as good when made with honey.

Sept. 30th. A terrible piece of news, if true, came to me over the air waves today. I am more than thankful that one of us was not the guilty party, but listen to this, children, and do be careful about your priceless weapon, the sting. A man was stung at a church meeting—not even a **bee** meeting—and acute edema, whatever that may be (something to do with the lungs and **moisture**, I believe) set in and he actually **drowned** in 20 minutes. I hate to believe it, but it has reached the papers. Maybe it is only one of those scare headline things. No one need use her sting carelessly, so be very very careful whom you sting and where! It is not nice to name names, so I won't say just who heads my list for a bit of punishment by the guards!



October 1st. Cool weather is coming, so I made my pet drone a birthday cake, and iced it with the most delectable honey icing, because you all know what happens to drones!

Nov. 1st. I believe now we can sit down and have our Thanksgiving for the grandest harvest of nectar in years. Sadness comes over me, because tomorrow my last two drones must be sent out into the cold cold world, but gladness also comes over me for my colony is in such perfect condition now and it is ready and waiting for its well-earned rest. Goodbye, dear friends. I'll be thinking of you all this winter, and if my fingers are not too numb I'll write a little more later on.



Utah Agricultural Experiment Station Recommendations for Insect Control on Seed Alfalfa — M. S. 65 March 1951

G. F. Knowlton, Research Professor and Extension Entomologist
C. J. Sorenson, Research Professor Emeritus of Entomology

Upon request of several County Agents, this outline, which has been discussed at various county alfalfa seed production schools, is made available in printed form.

Insect	Application	Recommended treatment. Active ingredient in pounds per acre	Alternative treatments (pounds per acre)
Weevil	Early spring*	spray - Chlordane, 1.5-2	
Lygus	Early bud stage	spray - DDT*** 1.5, or dust - DDT, 2	
Weevil		spray - DDT, 1.5, or dust - DDT, 2	
Aphids		spray - DDT, 1.5, or	DDT, 2; parathion** or TEPP, ¼
Mites		dust - DDT, 2	DDT, 3; parathion** or TEPP, ¼
		dust - sulfur, 20 - 25	10% DDT dust, containing 50 to 85% sulfur.
Lygus	Bloom stage (if necessary)	spray - toxaphene*** 1.5 or	
		dust - toxaphene, 2 (7 p. m. to 7 a. m.)	
Aphids		spray - TEPP, ¼ (evening only)	
Mites		spray - TEPP, ¼ (evening only)	

* When alfalfa shoots are 1 to 2 inches long, usually between March 15 & April 15

** Parathion must not be used, even at night, while alfalfa is in bloom. Parathion and TEPP are highly toxic to human beings. Use them in strict conformity to recommendations on the label.

*** The DDT and toxaphene treatments will control yellow striped armyworm. Toxaphene is the only chemical recommended for grasshopper control on alfalfa which is in bloom.

Utah State Agricultural College Extension Service. Carl Frischknecht, Director Cooperative Extension Work in Agriculture and Home Economics, Utah State Agricultural College and the U. S. Department of Agriculture, cooperating. Distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914.

Honey bees in great numbers were killed during August of 1950, and again in 1951, in the "Delta Tract" alfalfa seed area of Utah. Parathion applied during alfalfa bloom, by airplane and ground equipment, was the chief cause of honey bee field force poisoning.

Colony Absconds from Observation Hive

By Miss Flora McIntyre, Pasadena, California

Do bees sometimes swarm when the queen leaves on her mating flight? In a classroom in Linda Vista School near my home I recently stocked an observation hive with bees, brood, honey, and a virgin queen. The little colony settled down to business and all went well for ten days or so. Then suddenly one day just before noon the bees began a great rushing and roaring. For a time they were so packed into the end of the hive against the small entrance that I thought many of them would surely be smothered. But in 15 or 20 minutes they were all out in the air except about a dozen stragglers, drones and workers. They clustered like a normal swarm on a live oak on the school grounds and departed next morning. They left behind honey but no brood.

I can think of no explanation except the suggestion I have made at the beginning of this article. A colony was maintained for several months in the same hive in the same place both last year and the year before.

[It would appear that the bees swarmed out when the virgin queen left the hive, presumably on her mating flight. However, bees that leave the hive under such conditions, usually return in due time. Is it possible that this virgin queen had mated and was about to start laying eggs or had started, and that conditions within the hive were so congested that a swarm issued? You say the bees left no brood in the combs. If the queen went out on a mating flight, the bees might leave temporarily but would return because the queen would come back after her mating. The queen may have been a laying queen and the bees swarmed out because of some unfavorable condition within. However, a swarm usually issues when there is a considerable amount of brood in the combs of the hive. Your story makes us wonder just what actually did happen. —Ed.]

Two Queen vs. Single Queen Colonies

By E. S. Miller, Valparaiso, Indiana

I was interested in your experiments with two-queen colonies as described in Talks to Beginners in the July 1950 Gleanings. The second plan described, that of confining the queen to the lower story in early spring and placing the major portion of the brood above a wire screen in a third story with a young laying queen, is practicable and worthwhile and has been used with success. In case a colony is not sufficiently strong to warrant removal of more than one or two combs of brood, package bees may be used in like manner above a screen and united later in advance of the main honey flow. They may be united by shaking the bees and queen from the top story and letting them run in below the excluder. The two queens will settle their differences, the younger queen surviving. If proper swarm prevention methods are used honey production can be more than doubled by the above procedure.

There is no doubt that a colony with two queens and free passage of workers between them may produce a greater amount of surplus than will a colony with a single queen. The question arises as to whether such a double colony will produce more surplus than would the two colonies kept separate, either side by side or one atop the other over a screen. The amount of honey stored depends upon the number of workers, which we may assume would be the same in either case, and on the number of consumers, which likewise would be the same.

It seems that the only real advantage in having two queens is to build up a strong force of workers in advance of the main honey flow. Then by disposing of one queen and uniting, the feeding of excess larvae, rearing bees that have little or no value as producers, is avoided. Eggs laid during and after the honey flow do not develop into field workers until some five weeks later when the flow may be over. Few beekeepers seem to realize the enormous quantity of honey consumed in feeding useless larvae. In colonies that swarm, consumption of honey in brood-rearing usually amounts to considerably more than that stored as surplus. Much of this loss can be saved by uniting at the right time.

Live and Learn

By Propolis Pete

Ho Hum— What's a beekeeper to do on a dreary, wet winter's day. Not cold enough to freeze, but too miserable to be out. The bees have a solution. They just hang and seem to snooze. Maybe that's the best thing to do.

Of course, a beekeeper can do those things that he will wish that he had done, when the summer rush is on. He can fix up his equipment, like re-nailing those frames that are getting wobbly. But this is the kind of a day when a fellow thinks, "Never do today what can be put off until tomorrow".

This morning, while puttering around, I came across a copy of Gleanings for 1934. How things have changed, yet everything is the same. There was a letter from a reader urging beekeepers to use 10-frame equipment as standard. There seemed to be quite a rumpus about whether it was better to winter in a cellar or outdoors in a quadruple packing case. Allen Latham had a device to enable you to move bees a short distance without their drifting back to the old location. It was like a drone trap, but had a solid front with three holes bored in it, instead of the usual excluder wires. It looks good, and I am going to try it next spring on a colony that is about 500 feet in the wrong place.

Names were named that are now history. A food chamber of at least half super depth was strongly urged. M. J. Deyell and E. R. Root were going to Valdosta, Ga., for a bee meeting. But the big subject was wintering. (Was it ever settled?) Today's methods seem to be a lot better. At least they are less work, and judging by the reports of readers, they give results that are no worse. As a matter of fact, to me it seems as though the bees come through a lot better than they did when it took a whole day to prepare three or four colonies for winter.

In the current bee magazines, the main interest seems to be the breeding of better bees, and using them for pollination. And just as in 1934, we are jumping in with both feet. An idea is dormant for years, then suddenly takes a new lease on life, and the whole world seems to turn on that subject. Just as though the world hasn't been doing a pretty good job of turning for the past two billion years, more or less.

Late last spring, I got into a conversation with a farmer friend of mine about the benefits of bees to agriculture in general, and his farm in particular. He grows the usual run of crops around here, that is, leaf and root vegetables, with a sprinkling of minor crops like strawberries and lima beans. I told him that in some sections of the country, bees were taken to the bean fields for pollination, but from my own observations they did not produce enough to warrant the expense. That is a fact that has always intrigued me. I have visited bean fields in the morning and in the afternoon. I have visited them just before a rain, and for several hours after a rain. I have looked on clear hot days, cool wet days, and just plain days, and have yet to see a honey bee in them. When they are in full bloom, my bees are getting nothing, and are as ugly as sin. Yet another friend, a beekeeper as well as a farmer, claims that his bean fields are full of bees. He showed me a sample of fine light honey that he claims is pure lima.

One of the results of the conversation I speak about, was that I put three packages on the farm of the first friend, just to see what would happen. It was pretty late before they were installed on foundation, so we don't know what effect they had, if any, on the strawberries. I do know that he also reported that he didn't see a bee in his bean field; in fact, the only insects he did see there were the ones that he had to spray to get rid of. And he got a fine crop. Incidentally, those three packages took hold and built up like a forest fire. They were installed long after apple bloom, but filled their two hive bodies with comb, and the top body with honey, which was left for them to winter on. I have great hopes for them next year.

His field is less than two miles on a bee line from the fields of the other farmer who claims to get lima bean honey, and the moral of the story is that things aren't always what you think they are. Next year I am going to take a look and see what I can see.

Let's Make This Resolution

By Mrs. Benj. Nielsen
Aurora, Nebraska

Orange honey fluff pudding. — Photo courtesy Kellogg Co.

Have you been procrastinating about starting to use honey in cooking? Just promising yourself you will get around to it one of these days? Well, with the beginning of a new year why not make that one of your New Year's resolutions? Just pick out one recipe that has particularly appealed to you and try it now. Let honey show you what it can do. And if you are just starting out in this fascinating field, I envy you the thrill of exploring these culinary delights.

If you are already a honey cookery convert, let your resolution be that of inducing another cook to use honey in cooking. When she turns out rich golden brown breads and pastries, observes the subtle rich flavoring properties of honey in all branches of cooking, and realizes how delightfully fresh honey-way products remain, she will not only thank you, but pass on her findings to those with whom she comes in contact.

If we WOULD do this there would not be enough honey to supply the demand—no more concern over surplus and carry-over! What cost-free, effective advertising this would be for honey. There's no better advertisement for honey than a satisfied cook and her family! Let's resolve now!

Honey Orange Fluff Pudding

One and ½ cups orange juice, fresh or canned, ⅓ cup honey, ⅛ teaspoon salt, 2 tablespoons gelatin, ¼ cup cold water, 2 tablespoons lemon juice, 1 8-oz. jar (1 cup) marshmallow cream and 1 cup whipping cream.

Three cups oven-popped rice cereal, ⅓ cup melted butter, and ¼ cup sugar.

Roll cereal into fine crumbs; mix with butter and sugar. Reserve 2 tablespoons of mixture. Press remaining crumbs firmly and evenly in bottom of square pudding dish, 8x8 inches. Heat orange juice, honey, and salt to boiling point; add gelatin which has been softened in cold water; stir until dissolved. Add lemon juice and cool. When mixture begins to congeal; fold in marshmallow cream. Chill until firm enough to cut. Before serving pile stiffly whipped cream on top and sprinkle with remaining crumbs.

Honey Date Cake

One cup chopped dates, 1 cup boiling water, 1 teaspoon soda, 1 tablespoon butter, 1 egg, ½ cup sugar, ½ cup honey, 1 teaspoon vanilla, 1½ cups flour, ½ teaspoon salt, and ½ teaspoon baking powder. (One-half cup nutmeats, if desired.)

Pour boiling water over dates, add soda and butter. Meanwhile beat egg very light, adding sugar gradually. Stir in honey and vanilla. Add to first mixture. Stir in flour, sifted with salt and baking powder. (Nuts if desired.) Pour into greased baking dish. Bake in moderate oven, 350 degrees for about 40 minutes. Serve with honey sweetened whipped cream.

Honey Baked Squash

Wash acorn squash, cut in half, remove seeds and place in baking pan. Add 1 tablespoon of honey and strip of bacon to each cavity. Bake in moderate oven, 350 degrees F., about 1 hour.

Second Glances

C.M. Isaacson

Electric heating for small apiaries —especially a home yard—would constitute an interesting experiment, and be of definite value for weak colonies, increase, etc., as Mr. Crawford says (page 718). For large out-apiary systems it would be more or less impractical, not only from the standpoint of cost (50c per colony reported by Mr. Crawford) but even more because of unavailability of electricity in a good many cases.

To find real uses for propolis would be a big benefit to beekeeping—if the use was extensive enough to require considerable quantities. Of course, we should keep in mind that it is when bees use excessive (from our viewpoint) amounts that we class "bee glue" as a nuisance, for without it every storm would leave hives coverless, blown apart, etc. (page 719).

SELL your honey — don't just let the other man buy it, is about the substance of Clifford Muth's very sensible words (page 720). His advice is well worth a "second glance". Keep up to date on all sides of your business, check on any prospective buyers if at all in doubt, send really representatives samples of **each** lot, quote a tentative price for dealing, and think of **both** yourself and the one you are dealing with. It all will make both for immediate satisfaction and better prospects for continued dealing. And the final word is also good — don't be in too much of a hurry to sell during the rush season for the buyer. If one is financially able to wait, a better price may often result.

Let-alone hives have been the dream of most beekeepers down through the years (page 722). I believe that it was former Editor Demuth (of Gleanings) who had a comparatively successful let-alone **system** developed by him through necessity. Its principle of a food-chamber hive, as he called it later on, is in widespread if not nearly universal use today. Mr. Lund's use of a shallow super next to the bottom board evidently is mainly for a different principle — simply to give clustering space and occasional extra brood room, and thus help prevent swarming. Wintering in cellars, he does not need to have as much honey on the hive for winter.

No longer afraid of AFB! Those are simple words, but their import is almost sensational to beekeepers who have fought for years with heart-breaking losses against this disease. But Mr. Miller's words do contain truth that is becoming more and more apparent (page 724). I do believe, though, that we should still be "afraid", but not frightened. Sulfa, used wisely, has helped many a beekeeper through an experience which would otherwise have been rough. But when treating an affected yard, isolate bees and equipment. There are instances where even sulfa is not entirely effective, and without a quarantine, one yard could spread disease through all your bees.

Not being afraid does go a long ways towards preventing severe stinging from bees, but most of us find it hard to believe that Jesse Hernandez could deal with all strains of bees unprotected and not be stung (page 726). Personally, I can say that I have little fear, but do have considerable respect for certain colonies — in fact, I am not ashamed to confess that there have been times when I have beat a "strategic retreat".

Sure-fire ways are just not a part of beekeeping, Propolis Pete — at least no 100 percent for certain methods. There is too much "bee - cause" connected. But just a few words. There **is** a fairly dependable method of "requeening without dequeening"; raising a young queen in a nuc and letting her colony build up to good strength, then simply setting it on top of the colony to be requeened (if a honey flow is not on, use newspaper between). In most cases the upper queen will be retained. And the most certain way of requeening I know is to let a colony remain queenless until cells are sealed (a little over a week), then place your new queen on the comb and watch for the "nursing circle". Mailing-cage queen or laying queen, it seldom fails, and the queen begins laying within a day or two.

A blessed New Year to all of Gleanings readers. May 1952 be to everyone a year of peace; outwardly, surely; but most of all, within the heart.

Thief River Falls, Minn.

A Progressive Western Beekeeper

Mr. Wilbur Foster of Nyssa, Oregon, with his wife and sister.

For many years Wesley Foster was a valued correspondent to Gleanings from Boulder, Colorado. His father, Alonzo Foster, kept bees but never on a large commercial scale. In late years the Foster family has been extensively engaged in beekeeping in Oregon. Wilbur Foster, his wife, and sister paid Gleanings a visit on November 5. Wilbur has a thousand colonies of bees and counting all the bees owned by the Foster family, there are about 8000 colonies—enough to keep one group of relatives fairly busy!

With interest in pollinating projects growing every year, migratory beekeeping is again increasing fast. The modern way of moving is to avoid hive entrance screens, load the hives on the truck before the bees begin flying in the early morning, and as long as the truck is moving there is no trouble. However, there are towns and cities that have local ordinances against truckloads of bees entering the corporation without screening. Wilbur Foster has conceived a very good idea of having a canvas as large as the truck body with sides of screen which can be zippered or buttoned onto the main canvas and then tied at the bottom of the load. This can be quickly put on and quickly taken off, and to help keep the bees cool in hot weather, the canvas can be kept wet.

By having the screens separate they can be taken off and rolled up by themselves so that there will be little danger of injury until they are needed again. Outside of the town or city the canvas and screens may be removed again if desired.

Our hats off to a great family of pioneers that have successfully carried on in beekeeping for more than 50 years, during good and bad times!

Bees Hard to Kill

By S. G. Rader, Circleville, Ohio

Sometime in the fall of 1949 someone cut a bee tree on a farm adjoining mine near Piketon, Ohio. The tree was a medium sized black locust and the cut was about five feet from the ground on the east side of the tree. The opening made by the cut was about 18 inches long by eight inches wide leaving the bees exposed to the open side of the tree. The hollow in the tree extended downward from the opening about 18 inches in which combs were not disturbed. I looked in the tree several times last winter and saw the bees clustered in this hollow in the tree. I nailed a strip of tar paper over the opening and the bees are still alive at this date. (Dec. 9, 1950.)

In my opinion bees starve for want of stores or die from dampness in the hive for want of ventilation, and not from the cold of an average Ohio winter.

XUM

Asked & Answered

Requeening — How and When

Question: Will you please explain to me the various methods of locating the queen? Is it safe to let the hive requeen itself from year to year by supersedure? If not, when is the best time to requeen and how should the old queen be killed? One authority says in spring and another in August or early September.—Dr. C. M. Crawford, M. D., Ontario.

Answer: There seems to be no "royal road" to finding the queen in a colony. The best time to try to find her is during the middle of the day, or shortly after noon on a warm day when bees are flying well. A large number of the bees will be in the fields at that time and consequently it should be easier to locate the queen. It is customary to remove the outside comb or the comb nearest you. The queen is not likely to be on this comb but it is well to look on both sides. This comb should then be leaned against the front corner of the hive. The remaining combs should then be removed and examined carefully. If you do not use too much smoke you may find the queen quite easily, on one of the combs near the center of the hive. If you have a good strain of bees it may be feasible to permit the colonies to supersede their queen, which they usually do when the old queen has reached the end of her usefulness. When requeening is practiced it is usually done during late summer, preferably during August. The young queens introduced at that time will lay quite prolifically until cold weather sets in, and this will result in young vigorous colonies to go into winter quarters. These young queens will then be in their prime the following spring. First, be sure the colony is queenless. If the colony has been queenless 10 to 16 days, make sure there are no virgins in the hive. It is best not to remove the old queen until the time of introducing the new one; but if several days have elapsed be sure to remove all queen cells. To introduce, place cage between or on top of frames directly over the cluster. In the latter case the wirecloth should be down. The bees will usually gnaw away the cardboard covering the candy, eat the candy, and release the queen. The cage should be examined 24 hours after it is put in the hive, and the card covering the candy removed, if the bees have not gnawed it away. The colony should not be disturbed again for five days. Should the queen and attendants arrive feeble or daubed up, release her at once among the bees. If, after they have cleaned her up, they ball her, return her to the cage and introduce, as explained.

Remove Excluders During Winter

Question: In wintering bees outside, I pack my bees in two hive bodies—ten irame—with plenty of honey for winter and the swarms are strong. I am running for extracted honey and have a queen excluder on top of the first hive body to prevent the queen laying in the upper bodies. I have never used these excluders before this year. What I wish to know is, is it advisable to leave the queen excluder on or should it be removed? I have just taken off the top body from one swarm leaving two bodies and there were no bees in this top hive although it was well filled with honey. Apparently the bees were in the bottom hive or the two bottom hives and I am wondering if they will use the honey in the hive that has been left on above the excluder.—Marshall M. Murray, N. Y.

Answer: You should remove queen excluders from above the lower brood chambers during the winter, especially in your state where winters become quite cold. If you fail to do this, the winter cluster would probably move up into the upper or second chamber as the winter progresses. The queen, not being able to pass through the queen excluder, might be kept down in the lower chamber and would die eventually because of an insufficient number of bees in the lower chamber to keep her warm. Normally, during the winter a queen is somewhere in the center of the cluster. So this is why it is inadvisable to use queen excluders between the two hive bodies or brood chambers during the winter months. It seems probable that your bees will have an adequate supply of honey for winter and early spring stores because the queens were kept down in the lower chambers during the active season, thus giving the bees an opportunity to fill the upper ones, sometimes called food chambers, with honey for winter. During the spring months it would seem advisable to give each queen the run of two hive bodies in order that populous colonies might be developed. After the honey flow is well started, it would likely pay you to confine each queen to a single brood chamber.

American Honey Institute News Notes

By Harriett M. Grace, Director

What does the American Honey Institute's annual report mean to you? Simply this:

When you take your copy of the Annual Report out of the mailbox you hold in your hand the assurance that honey promotion is being soundly managed and at the same time successfully run. You know this immediately as you thumb through the pages of the report, for even a quick glance at its financial statement will show you that the Institute operates in the black. You know it is successful in promoting honey because so great a number of member beekeepers couldn't possibly be wrong.

Perhaps you will put aside your copy of the report until later in the evening when you have more time to look at it closely. Then you will come to these conclusions:

The American Honey Institute is not afraid to have all beekeepers know the exact status of its financial accounts. In fact, we want beekeepers to know about them, to keep track of them, to see exactly how their money is being spent. We enjoy inspection, for such inspection always results in better understanding and closer cooperation with beekeepers. We have nothing to hide and everything to be proud of.

The American Honey Institute is being supported by America's beekeepers. You will find members listed from every state in the Union, and even a few from foreign countries.

These foreign names represent a peculiar twist to the customary story; these beekeepers are not concerned with how much benefit they will get from their contribution to the Institute. Instead, they send in dues merely to signify their approval of our work, their desire to have a similar organization in their own country.

We receive many letters from overseas, asking help in starting a honey institute patterned after our own. These beekeepers know what it is like to be without marketing help on a national scale. They know how important such a national organization as ours can be.

The membership list grows constantly year by year. We recognize this as a good omen, as a true yardstick of the faith the beekeeper places in Institute service. We want to thank every member for this support.

A close survey of the financial statement reveals that operating expenses are kept at a minimum while most of the beekeeper's money goes for actual promotion. A few beekeepers complain that they don't see actual honey ads in their local paper, ignoring the fact that the logical person to insert those ads would be the beekeeper himself. The vast majority of beekeepers realize, however, that the sort of national promotion that the Institute does—sending honey recipes to housewives, dietitians, nurses, doctors, home economists, furnishing honey stories to newspapers, radio stations, etc. — serves to create a universal demand for honey that is realized by the individual beekeeper in increased sales.

You know, of course, that this annual report goes only to those beekeepers who have declared themselves members of the Institute by sending in their dues. Dues for membership in the AHI are a matter of conscience; it is up to the beekeeper himself to decide how much he **is able** to give, how much he **wants** to give. On this basis no beekeeper is compelled to give a certain amount; we feel that each beekeeper is best able to judge his own financial status.

There is still time to submit your dues for 1951. There is still time to have your name entered beside the hundreds of other beekeepers who are wise enough to want honey promoted and practical enough to know that such promotion takes funds. If you send in your check or money order now, we can still get your name to the printers in time.

Address all correspondence to American Honey Institute, Commercial State Bank Building, Madison 3, Wisconsin.

Our Cover Page

The cover page this month does not have much relation to beekeeping. However, Mr. Milo in showing a winter scene in the Great Lakes region does show what the beekeeper has to contend with in that climate.

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Editorials

The Weather No one seems to be able to do anything about the weather. The Northern states had more than their share of cold and snow during late December. However, this cold spell was preceded by unusually mild weather early in the month which permitted bees a good cleansing flight. We hope the weather man may be kind to beekeepers during the remainder of the winter. The heavy snow, if it continues, will be favorable for protection from the cold.

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Acarapis woodi Watchfulness continues necessary to guard against introducing this parasitic mite into the United States. Since World War II it has become established in this Hemisphere, namely, in Argentina. The ease with which bees can be shipped and smuggled into the country on one's person requires that an especial lookout be kept for this pest of bees. Our foreign friends who have had and are having experiences with the mite continue to warn us that it is a bad actor and that stringent measures are justified to protect ourselves.

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Bee Poisoning With new insecticides appearing every day and particularly such potent ones as parathion, it behooves all beekeepers to keep their eyes open for insecticide damage. Some of the insecticides are quiet killers. They bleed off the field force and the beekeeper blames the poor crop or the weather, the condition of the plants, or the strain of bees. Accurate figures on damage caused to bees by the use of insecticides are badly needed. Some organization should make a point of gathering such data.

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Why Not Paint Hives Red? E. L. Sechrist says that instead of red being a "HOT" color, scientists say that it is quite the contrary. He says that he himself, when in the tropics, made use of this knowledge to protect himself from the heat of the sun. He wore a red band or "puggaree" around his hat, which was also lined with red cloth, while, hanging down behind from his hat, a red cloth protected his neck, a sensitive place, from the sun.

He says further that thousands of experiments are reported on in the Minnesota Agricultural Report, Vol. LI. page 279, by W. B. Harvey, who found that the red color of apples was a protective coloration often preventing commercial loss.

The temperature under a red spot on an apple was repeatedly found to be 40° lower than under a green, gray, or brown spot in the same exposure.

Dr. Abbott, says Sechrist, has shown that a greater part of the energy of sunlight is made up of the long wave lengths. Tissues appear red because they reflect the red light. Red protects these parts from undue fluctuation in temperature with alternating sun and cloud. Red parts tend to become less heated in sunshine.

Perhaps we should pay more attention to scientific facts.

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Large vs. Moderate Sized Bee Clusters for Winter Gilbert Perigo, Chief Apiary Inspector of Indiana, in his December. 1951, letter to beekeepers raises a question as to the comparative value of different-sized clusters of bees for winter, and we quote:

"One thing that I have been in a quandary about is the comparative value of different sized clusters of bees for successful wintering. Does the colony that goes into winter cluster with a large force of bees always have a better chance of survival than the one with a comparatively small cluster? And, in case they both survive till spring, will the colony that entered the winter season with a strong force of bees build up to a better working force in the spring? Although I believe I will have to say that I prefer having my bees begin the winter with a large cluster, I sometimes have my doubts as to whether it is always advantageous. I like to see a queen that will continue egg laying until late in the fall and thus produce a heavy supply of young bees to go into winter. But yet I wonder about it all. More than one time I have wintered three and four frame nucs, in the same yard with full strength colonies—1, 1½, and 2-story colonies—and seldom did I have a higher percentage of winter loss from the nucs than from the full colonies. Now, don't get me wrong. I am not advocating the wintering of nucs, but it just makes me wonder and more confirmed in my belief that I don't know a great deal about it all."

During recent years other beekeepers have raised this question. The answer appears to depend on conditions that prevail in different

parts of the country where successful wintering is a problem.

Generally speaking, large clusters of bees are considered essential for successful wintering and the clusters should consist mainly of young bees. Large clusters, provided they are adequately supplied with good quality stores properly placed, are more likely to withstand the rigors of a very severe winter than smaller clusters. However, it is possible, by applying intelligent management, to winter colonies having moderate-sized clusters. During a mild winter when bees get frequent cleansing flights it is possible to winter "nucs" consisting of from three to five combs.

Some have wintered two or three "nucs" in a partitioned hive body, above a strong colony, separated by a wire screen, each "nuc" having an outside entrance. This method appears to have some merit, especially for carrying young laying queens over the winter.

A moderate-sized colony, or a slightly sub-normal colony in the spring in this locality, is likely to reach its peak of strength at the proper time to take advantage of the main flow from clovers, whereas a very populous colony will probably reach its peak too early for the main flow. Such a colony, unless it is divided or made into a two-queen colony is likely to loose its morale. It seems preferable to divide such colonies in the spring, which can be done with a little extra labor and equipment.

Theoretically, it might seem possible to go into winter with moderate sized colonies of uniform strength that would winter successfully and build up in time for the main flow without having to divide them in the spring. Perhaps there is a way of attaining this goal.

On the other hand, those who have very populous colonies in the spring should be thankful because the extra bees can be used to good advantage to strengthen weak colonies, or establish new colonies.

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Foreign Organizations Perhaps we could profit by knowing more about foreign beekeeping organizations — their large memberships, good finances. Several foreign beekeeping organizations, with potential memberships well under what we have in this country, maintain full-time paid officers and publish their own official magazines. In this connection it might be well to ponder that the United States is the only major beekeeping country that lacks an independent bee journal; that is, one published by the beekeepers themselves.

The British beekeepers as well as some of the continental beekeepers are pushing the formation of Apimondia, the only world-wide organization of beekeepers, now that the Apis Club has been disbanded. This project is exceedingly worth while and needs our support. Persons from many countries look up to beekeeping in the United States, yet we do little to help other countries. Strong international organizations should do a lot to promote world peace.

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Beekeeping Research at the Federal Level The Department of Agriculture recently received a serious curtailment in funds resulting in a decrease in research work of at least 10 percent. Although bee work was not singled out, its share meant the dismissal of seven employees and the dropping of whole projects. The reduction was made in favor of national defense.

No one can argue the necessity to keep our defenses in good repair. It is noticeable, however, in times of stress that private organizations maintain their research work nevertheless. Since research in agriculture contributes directly to food production one wonders if a cut in research represents the wisest means of saving money.

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College Instruction in Apiculture Very few county agents know anything about bees. The one who can help the beekeeper is rare. Without exception, county agents are graduates of our agricultural colleges. They, and also the home demonstration agents, as well as thousands of other students, go through four years of college work in agriculture without any contact with beekeeping. The beekeeping courses in our agricultural colleges need revamping. Basically we should not be teaching apiculture with the thought of making either more or better beekeepers. The object should be to enlighten as large a group of persons as possible with what the honey bee is and does.

A Flight of Fancy in Beekeeping

We read in the October, 1951, issue of "The Journal of Agriculture", published in Victoria, Australia, that in most districts colonies have wintered well and are now in good condition. In this northern hemisphere bees are entering winter. Are the Australians six months ahead of us or are we six months ahead of them? A $64.00 question.

Perhaps the time may come when we can transport apiaries or packages of bees by plane at the close of the season here, in order to establish colonies in the southern hemisphere at the beginning of the season there and thus enjoy a perpetual honey flow throughout the year.

The cheapest way would be to ship packages from one hemisphere to the other every six months.

That reminds us that we recently received an article from a beekeeper in Europe outlining a program for international beekeeping on a commercial scale which involved moving bees from country to country to take advantage of honey flows as they occur.

Perhaps most of us are too local in our thinking to even consider the feasibility of such an undertaking. With transportation facilities improving each year the world is a small place after all, in fact, it is shrinking each year. Some of us may be surprised at what will happen to beekeeping internationally in the next few decades.

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The Food Chamber Hive

It may be a little difficult to say just when and where the food chamber idea, as applied to a beehive, originated. E. R. Root was one of the first advocates of the double-story brood chamber. The late George S. Demuth was a strong advocate of the food chamber. He at first called it the automatic feeder.

E. D. Townsend of Michigan was one of the first to leave a shallow super of honey on each colony in the fall so that the bees would have an ample amount of stores during the winter and early spring. This was done mainly to avoid the labor of feeding sugar syrup. Mr. Townsend operated out-apiaries.

The late Morley Pettit, Ontario, used a shallow food chamber in his commercial apiaries. Mr. Pettit fed some thick sugar syrup late in the fall, in addition to providing a shallow food chamber, in order to provide an adequate amount of stores, also to insure good quality food for the bees during the winter.

It would seem that the majority of beekeepers over the country, especially the commercial class, have now adopted the food chamber hive or two-story wintering. Some beekeepers winter each colony in three stories.

The main advantage in using the food chamber hive is that it saves a great deal of labor of feeding bees in the fall, and results in populous colonies ready for the major honey flow,—provided, of course, intelligent apiary management is applied throughout the season.

There are still a few beekeepers who winter in single-story hives. This is perfectly possible, because a single-story 10-frame hive will contain enough honey and pollen and bees for successful wintering. It is usually necessary to feed thick sugar syrup late in the fall after brood rearing has ceased and the surplus honey has been removed. This naturally involves considerable labor and expense which could be obviated with the use of the food-chamber hive. It is also necessary to do early spring feeding when wintering bees in single-story hives. This also involves considerable expense and labor.

In Gleanings some years ago there appeared the following statement:

> "Whenever a beekeeper decides to leave a deep super of honey on each colony in the fall in addition to the honey that may be in the bottom brood chamber, —another beekeeper is born."

Some hesitate to leave that much honey on hives in the fall because they think it is unnecessary. As a matter of fact, the extra honey left on is never wasted. Bees do not overeat. Some old bee masters have said that there should never be less than 15 pounds of honey on each colony at any time during the entire season. If the amount of honey gets down below 15 pounds in the spring, the queen will probably begin curtailing egg laying and this in turn results in a colony under par in strength. On the other hand, when there is an abundance of honey in each hive at all seasons of the year, colonies are likely to be populous and when the major honey flows come such colonies are ready to take full advantage of them.

From North, East, West, and South

SOUTHERN CALIFORNIA, Dec. 3

Weather: Even though we are now supposed to be having our winter season, the weather is really delightful. During November we had a few scattered showers of rain but no heavy downpours. Some places were lucky and had from two to three inches but most places received only light showers. There has been some snow on the mountains but the warm days melted most of that in short time.

Condition of Plants: What little rain we have had has made the grass begin to grow and the shrubs and trees put on a brighter look. No one watches the condition of plants more closely than the Southern California beekeepers.

Market: The honey market does not seem to strengthen. The same condition apparently exists with most farm products. In fact, wholesale prices are dropping in some cases. Is this because of the season of the year or because of the very unstable condition of the world? At the same time the retail prices of many foods are advancing—but honey doesn't seem to be on that list.

Miscellaneous: This is the season of the year when beekeepers can take time out to relax or vacation a little if they like. Or perhaps they are busy with the odd jobs around home. But it behooves them to keep an eye on their bees. If the weather should suddenly turn cold and remain so for some time, the colonies may need some feeding—either sugar or honey combs saved for that purpose.

A very interesting prediction in regard to Southern California weather was heard today. A man who has been connected with the forestry service for many years said that he looks for the rainiest season that we have had in a long, long time. Here's hoping that his prediction is 100 percent correct.

An article in November Gleanings on "Honey and Hay Fever" is most interesting. If the use of honey in one's diet would cure hay fever generally, we are sure that the honey market would immediately be greatly stimulated.

Many of our Southern California beekeepers are going to Asilomar for the State Beekeepers' Convention to be held December 4 to 6. There are many interesting subjects to be discussed and it will undoubtedly be a lively convention.—L. L. Andrews, Corona, Calif.

NORTHERN CALIFORNIA, Nov. 30

Weather: Just as I was closing my last month's report rain began to fall, and we have had intermittent showers throughout the month; that is, in the valleys of this part of the state and as far south as Fresno. In this area, a total of 3.35 inches has fallen to date, 1.79 inches in this month. Last year at this time we had received 5.591 inches, but last fall was a wet season, with destructive floods. Normal precipitation for this time of year is 2.55 inches. The higher mountains are now covered with snow to a considerable depth. Headlines in the Sacramento Bee on the 26th reported the rescue of a family trapped four days in Sierra snow on Highway 88. They were trapped in a cabin not far from their snow-covered car near a place called Tragedy Springs.

While driving to a beekeepers' meeting in Fowler on Tuesday, I could see the snow-capped mountains from the Sacramento and San Joaquin Valleys. On the return trip, however, I had to drive more than 100 miles through fog in which the visibility averaged the distance between two to five telephone poles. There were only two wrecks in that distance, which is about par for the course in this type of weather. According to statistics, by the time this gets to the reader the millionth person will have been killed by automobiles since their invention. Weather plays an important part in these accidents. (Drive carefully).

Conditions of Colonies: Our colonies entered the fall period in excellent shape, and reports from bee-

keepers indicate that the condition of all colonies is considerably better than last year. There were some losses of field bees and a reduction in colony strength in many colonies in the cotton fields west of Fresno, and these are not in too good condition now. Some recovery in colony strength was made after the bees were moved from alfalfa locations in areas where no surplus was produced. In most instances, however, colonies came out of seed areas much stronger and heavier than last year. This increased weight will enable the beekeepers, who wish to make increase, to divide their colonies during late March or early April, especially if they are located in fruit areas or where willow or mustard is available for pollen and nectar sources.

Number of Colonies. The increased demand for colonies for pollination services has caused most beekeepers to fill up all available equipment and to buy up small lots of bees when such are offered for sale This benefits the industry for it places a greater number of colonies in the hands of experienced beekeepers and removes many colonies which are not given proper care. Some package bee and queen producers increased their holdings in bees by transferring or combining nuclei at the close of the queen-rearing season. These made excellent colonies for either honey production or for pollination. Some producers made increase as a means of controlling swarming and then placed the increase in seed fields instead of combining the colonies at the beginning of the major honey flow. If this increase in numbers of colonies continues another year, California may get into the 500,000-colony bracket, which is a lot of bees for any state. A considerable number of colonies are being offered for sale because of a shortage of experienced help.

Pollination Demands: Requests for colonies of bees to be used in legume seed production are being made at this time, which is earlier than last year by some months. The demand is such that it will take a careful allocation of all available colonies in order to supply the demand. In one area, the demand has increased from approximately 35,000 to near 60,000 colonies. at last reports. This will mean that colonies will have to be drawn from distances of more than 100 miles from that seed area. It also means that beekeepers need not give their services away but can secure a favorable return for the expense of maintaining colonies for this agricultural service. The grouping of thousands of colonies in rather restricted areas is attendant with greater dangers from chemical poisoning. However, when growers pay a fair rental for the use of the colonies, they generally are much more considerate about the types of chemicals used and keep in touch with their neighbors to see that their equity in the pollinators is not destroyed by the misuse of poisons.

It is possible that fewer colonies may be moved to Oregon this year because of the increased local demand. Why haul bees 1000 miles when they could be placed much nearer home? Oregon has been willing to pay a better return for the use of bees than some of our own producers, and that seems to be the an$wer. More colonies may move down toward southern California this year, rather than over our northern border.

A more uniform contract would ease the situation for both the seed grower and the beekeeper. This improved situation is being worked out by beekeepers and seed growers getting together for their own mutual interests. The seed growers want to be assured of bees and the beekeepers want some guarantee or assurance of income from pollination before they leave honey-producing locations. Some beekeepers are holding their locations with a token number of colonies from which honey can be taken to feed the pollinating units if they are not self-supporting. The **minimum contract** for colonies will vary with potential seed and honey yields but should not be less than the value of a 60-pound tin of honey per colony when three colonies are used per acre of alfalfa.

The Honey Market: For some good reason, most of the honey in California has left the hands of the producer. This should increase the demand for what is being held by those who normally distribute their sales throughout the winter and spring months. The price has been, generally, at or above support prices. The demand for honey could be materially increased with a greater emphasis on honey sales through the use of appropriate posters in restau-

rants, bakeries, and stores wherever a food product is sold. This can be done only through handler and producer cooperation in financing the program of honey promotion. The American Honey Institute is doing an excellent job **but could do so much more if they had more to work with.**—J. E. Eckert, University of California, Davis.

MONTANA, Nov. 30

Weather: Up to the present we have had a comparatively mild fall. There has been a good deal of rain and snow in the lower elevations and plenty of snow in areas of 5000 feet elevation or better, but we have not had any extremely cold weather as yet. Some people were expecting a very hard winter this year, but so far it has been very nice. The sun has been shining for the last few days and it has been so sparkling and clear that it really makes a man glad he is alive and able to enjoy it.

Condition of Bees: Most of the bees seem to be in excellent condition for winter with most of the colonies having ample stores. However, in some areas considerable feeding has been done. Practically all of the bees have been packed and prepared for winter and the beekeepers are settling down to routine tasks.

Market: So far there has been a good demand for honey throughout the State with a large volume of it already shipped out or contracted for. There has not been too great a demand for honey locally, but some beekeepers have sold a good deal of their honey to the local stores.

There seems to be a great demand for beeswax with offers still coming in.

Most of our so-called "good" customers who came around during the war and told us they would always buy honey from us if we would just sell them a little, have either died or forgotten us because none of them have ever come around again.

Miscellaneous: The Montana State Beekeepers' Convention convened at the Baxter Hotel in Bozeman this morning with a good attendance of beekeepers from points throughout Montana. Considerable business is on the agenda with a good deal of discussion going on concerning pollination, freight rates, and insecticides.

Now that the major portion of the big game and bird hunting seasons have drawn to a close it appears that the bees will receive slightly more attention than they have been getting for the past month or more. From the information we have been able to gather, it seems safe to assume that a good share of the beekeepers of Montana spend almost as much time hunting and fishing as they do with the bees.—Parson Pile, Corvallis, Montana.

TEXAS, December 5

Weather: The first killing frost of fall, which covered most of Texas, occurred on November 3, somewhat earlier than usual. The present drought persisting over a period of nearly two years is the most prolonged in over 60 years according to official weather records. However, rainfall during November was helpful in most sections and moisture conditions are now more favorable than last year.

Bees and Plants: The early fall frost ended the fall bloom and consequently the last available source of nectar and pollen. Brood rearing has ceased and the bees are relatively inactive at this time. Most colonies are well populated with a good portion of young bees obtained from rather active early fall brood rearing; however, colonies vary widely as to the quantity of winter stores. Locally in upland locations colonies are light due to limited fall bloom while in river bottoms colonies obtained a good supply of winter stores. In Southwest Texas the fall bloom of brush and broomweed was of little value. Many beekeepers report their colonies short on pollen. On the South Plains a good yield was reported from cotton in October which added materially to the year's honey crop in that area. Rainfall, during the month over a large area, helped germination of fall seeded legumes and early

spring-blooming wild flowers and conditions of plants are better than last year's.

Market: Honey continues to move actively in the retail market at prices which have prevailed for some months. Comb is selling at 8 to 10c per pound higher. A comparison of prices shows greater price range for the same brand and pack among different grocers than among the various brands on the shelves of any one grocer. All are high-grade table honey. Apparently some grocers are selling honey at a rather small margin above cost.

Miscellaneous: In traveling along on highways throughout the more intensively cultivated sections, one cannot help but note the prevalence of the winter cover crop—Austrian winter peas. This legume is seeded in early fall and grows during the winter ready to be plowed under about March 1, leaving the land ready for spring planting of the usual summer crops. While the peas are valuable largely for winter cover and green manure they are of no value to bees. Wherever livestock is kept, sweet-clover, vetch, and other legumes are more valuable for winter cover, grazing, and either hay or seed crop. For the sake of beekeeping it is hoped that the latter will continue to find favor with farmers. Migrations of bees are now underway from other states and other Texas points to south Texas with few yards being moved to the Lower Rio Grande Valley. Within a year more facilities for irrigation will be available but the loss of citrus trees from last winter's freeze will not be fully replaced for several years. However, beekeeping in the Valley will come back within a few years.

The American Beekeeping Federation will hold its annual meeting at the Baker Hotel in Dallas on January 16 to 18. A good program has been arranged and a large attendance is expected. At this writing the Southern States Beekeeping Federation and the American Bee Breeders' Association have just completed their joint meeting here at College Station on December 3 and 4. Further report of this meeting may be found elsewhere in this issue.—A. H. Alex, College Station, Texas.

WESTERN NEW YORK, Dec. 3

Weather: Western New York ushered November in with an 18 inch snowfall which caught many bees unprepared for winter. Alternate rain, snow, sleet, and generally disagreeable weather prevailed throughout the entire month making work with bees very difficult and slow with the result that there are still some things to be done in December which thus far has given us pleasant days with limited bee flight. However, the season for 1951 as a whole, has been favorable for bees and the crop on an average has been better than for about ten years.

Condition of Bees: Most bees in this section are in fair condition for winter, both in stores and strength, but there is wide variance with yards only a few miles apart, some yards being weak in bees and low on honey. Honey plants, especially new seedings of clover, look well.

Markets: Honey prices are about stable around support level with most beekeepers marketing their large lots through the Co-operative. The general farm conditions throughout the fruit section is one of general depression with many large operators on the verge of bankruptcy as a result of several years of high costs of production and low prices for fruit. —Howard M. Myers, Ransomville, New York.

WISCONSIN, December 5

Weather: Wisconsin has had two consecutive years with above normal moisture. In some sections this resulted in an excellent crop, but in others wet weather during the main honey flow decreased yields. Several weather records were broken this past fall. We had the coldest early November in the history of the Weather Bureau and the highest temperatures ever recorded the first days of December.

Winter Preparation: Bees appeared in good condition in late November, but heavy feeding was necessary in some apiaries. Our system of management turned out to be ideal

in such a season as 1951. There was practically no nectar flow following the white and alsike clover bloom, which ended in late July. After a heavy honey flow there was a complete reversal and the bees barely made a living during August and September. We use three brood chambers throughout the year and in our system of swarm control reverse the brood chambers whenever the upper chamber is full of honey, pollen, and brood. In the last reversal, at the beginning of the honey flow in June, there was considerable honey in the upper brood chamber which was put down on the bottom board. There was also some honey in the middle brood chamber. During September and October the bees carried this honey from the lower brood chamber up into the upper, thereby arranging their own winter food supply. We fed only about a dozen colonies with sugar syrup.

Annual Convention: The annual convention of the Wisconsin Beekeepers' Association was held at Wausau on October 30 and 31. The Association has had an enviable history; during the past 10 years it reached a total membership of almost 700. It is down slightly now and as dues were raised to $2.00 at the annual meeting, we are wondering if the membership will drop.

Nosema: One of the topics discussed at the convention with much animation was that of losses from Nosema, especially in package bees. It is well for Southern breeders to take note of the observations and reports of beekeepers from all over this state. Microscopic examinations indicated that many queens shipped in had attendants infected with Nosema. Such queens are likely to become infected with the disease. Last April many packages contained a high percentage of infected bees. One beekeeper reports a loss of about $900 in money spent for packages that failed, to say nothing of the crop he didn't get. Our beekeepers are looking for sources of stock free from Nosema and the shipper that can furnish that kind of stock will get the business. They are willing to pay more for disease-free stock, as Nosema is causing more loss than all other diseases combined.

The statement was made that beekeepers in some states claim they do not have Nosema but the opinion at the convention was they do not recognize the disease and have not made tests for its presence and attribute losses from Nosema to other causes. A good deal of study has been given the disease in Wisconsin and the boys feel they know what they're talking about.

Winter Inspection: We know we are waving a red flag at some beekeepers when we mention examining colonies in early February, but that's what we're going to do and have been doing the last five years. We know we have saved colonies and it has paid well. The object of an inspection on mild days with the sun shining and there is no wind, is to determine if honey and pollen are available to the winter cluster so starvation may not occur. Every year we have found from two to three combs with patches of brood as big as one's hand present in early February, regardless of what the weather has been during January. This brood rearing, present in all normal colonies, requires considerable honey and if the weather is cold during late February and March, as is usually the case, the bees may not be able to reach stores in combs outside of the cluster and so will starve. We see to it that the combs adjacent to the brood contain pollen and honey and we move some in if necessary. If there isn't any honey available we feed sugar syrup by sprinkling it directly into the combs with a sprinkling can while hot to the touch. Try it sometime and see how interesting it can be to examine bees in February. One learns a great deal about the work and life of the honey bee by so doing. If A.F.B. is present it can be detected at that time as quickly as at any other time.

The Market: Most Wisconsin beekeepers are in favor of the price support program. Trouble is it does not work too well because not enough processors are buying honey for the government program; in Wisconsin, as far as we know, there is only one, Honey Acres, at Menomonee Falls. Some beekeepers located several hundred miles from this point find it difficult to bring in their honey and so are subject to pressure from buyers, who may offer them much less than the floor price. When some buyers are able to get honey cheaper than 10c, they can undersell their competitors, who may then be compelled to reduce

their prices, and so price cutting begins. After all, isn't price cutting what brings prices down? So if we didn't have a floor or price support, we may be sure prices would not be what they are today. In Wisconsin, the government loan program would not be of too much help. We don't have very many commercial beekeepers who would need a loan but do have about 10,000 small ones who would not need a loan but are benefited by price support.—H. J. Rahmlow, Madison, Wisconsin.

ONTARIO, December 8

Whew! The heat. Glancing over my notes in the December issue of Gleanings which arrived today, my description of our November weather with its premature w i n t e r, seems strangely out of place now. For the past two weeks the weather has been warm and springlike with considerable rain. Not a vestige of the snow that covered the ground then, remains now. The temperature is hovering around the 60 degree mark, considerably higher in the sun, and the bees are flying. There is no frost in the ground and the lakes and rivers are becoming free of the ice which sealed them over a short time ago. We are hoping for a "White Christmas", as snow is traditionally part and parcel of the Canadian Christmas scene.

Highlight of the events in the realm of beekeeping in Ontario recently, was the Ontario Beekeepers' Association Convention in Toronto, on December 3, 4, and 5. Toronto papers reported an attendance of 300 which included a galaxy of beekeeping "greats" both in U. S. and Canada. The President and Secretary-Treasurer, and several members of the Canadian Beekeepers' Council were present, enroute home from the Annual Meeting of that body in Quebec City. Also present were W. H. Turnbull, Provincial Apiarist of British Columbia, Frank R. Garland, manager of the Manitoba Co-operative; Mrs. Harriett Grace of The American Honey Institute, Roy Grout, Hamilton, Ill., Dr. W. L. Coggshall, Cornell University, as well as prominent Ontario and Dominion leaders in the industry. The main theme of the convention centered on honey sales promotion. This was the subject of able addresses by Mrs. Grace and Mr. Grout.

While it is impossible to go into detail in connection with the various addresses on the program, I do want to devote some space to the work being done in the honey promotional field by Sports College as outlined by a representative of that organization. Possibly many readers are not familiar with the organization and function of this body, although it is well known in Canada. As to its aims and objects, I quote from its official publication, "Sports College Research Guide".

"Sports College is a nationwide, non-profit, public service project operating as such on letters patent from the Secretary of state. It is designed through its activities to help raise the standards of national fitness, sports efficiency, and health in Canada.

"To reach this objective Sports College stresses the 'sports' approach, believing that by creating a greater interest in sports, and teaching those participating in such activities (players, coaches, and leaders) to use the right methods, the total objective of general fitness and health can be attained."

Sports College is administered by the National Sports College Association. A group of public service minded Canadians, headed by General H. D. G. Crearer, Commander of the Canadian Army in the 1939-1945 war.

Now the reader may ask, "What has all this to do with honey promotion?" Early in 1951 the Canadian Beekeepers' Council entered into an agreement with Sports College, by which the latter would test honey as an energy food for those engaged in athletic competition, in comparison with other products classed as energy foods. Results of these tests were to be announced through the following media: The weekly Sports College national network radio broadcast, Sports College syndicated newspaper columns, Sports College Research Guide, various technical publications of Sports College, clinics and lectures staged by Sports College in its field work, by research reports of actual tests distributed to key personnel in the field of sports, physical education and general fitness, and through magazine and newspaper stories

written about Sports College.

Other general factors in this promotion were:

A. To compile information about the effective use of honey by individuals and teams in competition and in actual tests.

B. To conduct research to measure actual value of honey for energy and endurance purposes.

C. To develop "special purposes" for honey in the fields of sport and fitness.

To date under the terms of the agreement the value of honey as an ideal energy food has been recommended six times on Sports College radio sessions. In doing this it has been suggested that honey "should be used as a general food whenever sweetening is required." "It is an ideal breakfast food to give energy for the day"; "A perfect energy food to be taken either before activity to provide energy fuel or afterwards to replenish it"; "Excellent when used between periods of activity to sustain energy level"; "Efficient when used to stop any energy lag such as in mid morning, or mid afternoon.".

From the above quotations it is possible to gain some idea of the advertising value of this propaganda which is being distributed throughout Canada. With the almost universal interest in sport, and hero worship of athletes on the part of our boys and girls, it augurs well for the future of honey.—Allan T. Brown, Peterborough, Ontario.

Merit Award for E. G. Brown

Mr. John G. Jessup (left), President of the Iowa State Beekeepers' Association, presents Mr. Ed. Brown (right), of Sergeant Bluffs, Iowa, a Merit Award for outstanding achievement in the field of Iowa beekeeping. The presentation was made November 15, at the fall meeting of the Iowa State Beekeepers' Association. Mr. Brown is a prominent leader in honey production and marketing, having been active for many years in beekeeping organizations.

XUM

Beekeepers from the many countries who attended the International Beekeeping Conference grouped before the building in Leamington where the meetings were held.

Echoes of International Beekeeping Conference

By C. G. Tollafield, Sales Mgr. of The A. I. Root Co.

(Paper read at Empire State Beekeepers meeting, Ithaca, New York, Dec. 13, 1951)

During the 20th Century the world has grown very small, planes take us to any point in the world in a matter of hours instead of weeks, radio brings us the news as it is made, whereas the battle of New Orleans was fought several days after peace was declared in Europe. Because of the smaller world and closer international contacts a worldwide viewpoint and understanding is called for by citizens of any country.

Many beekeepers in this country realize the worldwide aspects of modern beekeeping. Also, no doubt, such beekeepers know the aspects of beekeeping which are not so modern and as carried on in some countries today.

There are, however, many beekeepers who do not realize how worldwide modern beekeeping is, that the Langstroth hive used in this country is practically the accepted hive throughout the world. In Europe there are still hives being used which are or were typical national hives, but gradually even in such countries the Langstroth hive is rapidly taking its place as the national hive.

Do we realize that bee journals are published in almost every language? Japan has published two or three journals, China has their bee journal, and even India now issues one or two bee journals, although the apis Indica bee, and not the Italian bee, is standard in India.

This country has exported modern beekeeping equipment in considerable volume to many countries in the world who have over the times given attention to modern beekeeping. The picture changes as the years go by, but as one country becomes established and finally local manufacturers of bee supplies are developed, then other countries open up. Some years ago South American countries possibly were the most important importers of American-made bee supplies. Now, however, modern bee supplies are manufactured in most South American countries and it is the Asiatic countries which are importing American bee equipment.

To foster this worldwide interest in modern beekeeping the International Beekeeping Conference has been formed. Fourteen conferences have been held, one of the early meetings, we believe, was held in Quebec, the others in European points. The Conference is held every other year. The fourteenth International Conference was held in the British Isles at the town of Leamington. The reason for selecting Leamington for the fourteenth Congress was because of its accessibility. It is in the center of England, and afforded ideal headquarters for the visitor from abroad, as it is historically well located. It was only a short drive from Leamington to Shakespeareland, George Elliott country, and Sulgrave, which, as

you know, was the English home of George Washington's ancestors.

This Conference brought together well over 35 representative beekeepers from countries throughout the world. Representatives were there from such points as Australia, Nyasaland, East Africa, Gold Coast, West Africa, Japan and China. Four men from the United States represented the beekeepers of this country; these four being Dr. H. F. Menke, Entomologist of Washington State, Dr. A. J. Todd, Entomologist, Tucson Government Station, Arizona, Prof. William A. Stephens, Extension Specialist, Raleigh, North Carolina, and C. G. Tollafield, Medina, Ohio. There were 350 registrations recorded, indicating in itself the interest taken in these International Congresses. The meeting would have been a veritable tower of Babel had it not been for the fact that the citizens of other countries are much better linguists than are citizens of Anglo Saxon countries. We do not generally speak any language other than our own, whereas the average European, Japanese, Chinese, or other Asiatic speaks several languages in addition to his own.

The meeting opened on Monday, the 3rd of September, and ended on Saturday, the 8th of September. Each day's lectures were very heavily attended, and the smoothness of the week's Congress indicated the hard work and forethought necessary in making all arrangements.

The opening day, Monday, was registration day, a banquet being held that evening, with over 300 attending. The Mayor of Leamington welcomed all delegates individually. It might be added this was somewhat a picturesque event, the Mayor standing at the top of a wide staircase with the Mayoress, the Mayor being dressed in the traditional robes of a Mayor, such tradition being close to the heart of the British. Some of the addresses were given on the papers read in the language of the speaker. To simplify this situation each registrant at the Conference was given a book giving each paper or address written in English, so when any particular paper or address was given in a language other than English it could be followed at the time or later by reading the English translation.

The program during the first day, or Tuesday, included a paper by Dr. Menke on "Insect Pollination of Apples in Washington State" and to indicate the wide range of beekeeping thought, the program during the same day included a talk by a representative from India on the bees of India, and "Studies of Migratory Beekeeping in the Punjab".

No doubt many of you have read or heard of The Reverend Brother Adam of Buckfastleigh Abbey in southern England, who is probably the best queen breeder in that country. He gave a paper on queens which was particularly enlightening. He emphasized the fact that he did not introduce queens but rather substituted queens. Brother Adam made one statement which upset some prior idea, a statement that there is no such thing as colony odor but that there may be hive odor, a combination of odors derived from combs, brood, honey, propolis, etc., but such hive odor can hardly form a sufficiently distinguishing mark whereby the bees will be able to recognize one and another. He went on to say that colony odor is a fictitious assumption, and said in every case whatever the method of introduction employed, or whatever the condition of the colony, the factor which causes acceptance or rejection in introduction is primarily dependent on the behavior of the queen. The behavior of the queen in turn is subject to her condition at the time she is liberated.

The program on Wednesday took the Congress out of town. A visit was made by bus to the "Gloucestershire Beekeepers' Annual Field Day!" There were about eight or ten busloads in the caravan, and the journey took about four or five hours each way. The Field Day was held at the second oldest agricultural college in England, a very nice lunch was served on arrival, and there were several lectures being given throughout the College permitting the visitors to attend the meeting most appealing to them. At one of the meetings a movie was shown covering the artificial insemination of the queen. It was a most wonderful movie, the detail was superb, and when one sees the operation so enlarged as the movie would show it, then one wonders whether a queen which has been so handled is of great value or will give a very long life service. Later on in the day before the busses left for Leamington tea was served. The whole world in England stops for tea, of course, and after all it is not a bad idea. If we

(Continued on page 53)

A Talk to Beginners

M. J. Deyell

At the beginning of another year, for the benefit of both beginners and more experienced beekeepers we are using an article which will give the reader an insight into the life of a colony of bees. It is entitled: "The City of the Bees."

The House the Bees Live in

A colony of bees is a little city in itself. It has regular streets and alleys for the passage of its inmates and those streets are kept clean. In some respects it is like the human kind but in another way it is organized on a different scheme that has for its goal the survival of the fittest irrespective of ethical or moral rights.

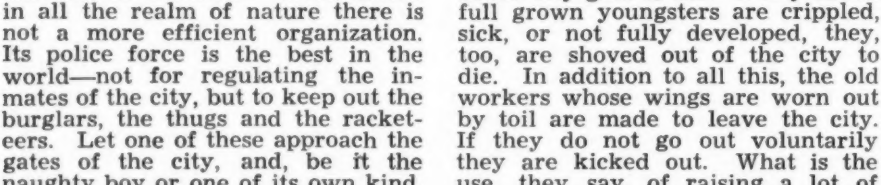
The house (the bee city) the bees live in is air cooled, or more exactly "air conditioned," in hot weather. The temperature inside is always the same, no matter how oppressively hot it is outside. It is thought that for thousands of years bees have known and used the science of ventilation and air conditioning. The wise man has said, "Thou sluggard, go to the ant." If he had said, go to the bees, he would have been wiser.

In the bee city there is no mayor or city manager, no city council, no political boss and while there is a queen she does not direct its policies nor its destinies. Nevertheless in all the realm of nature there is not a more efficient organization. Its police force is the best in the world—not for regulating the inmates of the city, but to keep out the burglars, the thugs and the racketeers. Let one of these approach the gates of the city, and, be it the naughty boy or one of its own kind, he or she will be so severely treated that they will retreat in utter rout.

The inmates are all for one and one for all. There is perfect cooperation and unity of action. There are no jealousies, no strifes for political preferment, no unions and no strikes. They cooperate and do not fight among themselves. They are intensely patriotic, and if need be will fight their enemies. Their prowess is not questioned by any living thing that creeps, walks, or flies. Even man has a most wholesome respect for them. Man must deal with them if at all on their terms.

Their scheme for the division of labor is the best in the world. Every worker knows her precise job and does it without being told or shown by a superior, for there is no superior.

In this bee city there is no unemployment problem. Nor is there any unemployment or old age pension. None is needed. The population of this bee city is carefully regulated to the seasons and the amount of work to be done. This means, of course, a perfect scheme of birth control. When depression or a bad season comes the bee city stops raising more babies. When there is danger of the city starving the control bees will dump the half-grown babies (bees in the larval form) out at the city gate to die. If any of the full grown youngsters are crippled, sick, or not fully developed, they, too, are shoved out of the city to die. In addition to all this, the old workers whose wings are worn out by toil are made to leave the city. If they do not go out voluntarily they are kicked out. What is the use, they say, of raising a lot of babies or cripples and keeping a lot of old folks that can't work any



Queen Worker Drone

(egg)(larva) (pupa)(adult)

Above: Stages of development from an egg into a honey-bee. After the egg is laid it hatches at the end of three days and enters the larval stage. The larva grows and at the end of 21 days the worker-bee will cut its way out of its cell. The drone takes 24 days and a queen needs only 15 days.

At left: Bees surrounding their queen to feed her, clean her, and watch over her.

more? To feed the unborn and those that can't work might mean that all would starve. Every one works but father (the drone), and even he is ruthlessly kicked out when his services are no more needed.

If the queen does not rule or boss, what does she do? She lays all the eggs, one or two thousand a day, and if she falls down on the job she, too, is kicked out and another takes her place. The slogan is efficiency. If you don't work or can't keep up your end of the job in that bee city you shall not eat and so the halt, lame and inefficient must die that others may live; and so the slaughter of the innocents goes on. This, in short, is the political economy of the bee city. In some respects it may be emulated by man. In others, it is too cruel and heartless. Man wouldn't stand for it, but he will receive a dole, even though in many cases able to work.

Interesting Facts About Bees

There are from 30,000 to 75,000 inmates in the bee city known as a "colony."

The Queen

Normally there is but one queen-bee in a colony or city.

As a rule, two queens do not get along peaceably in the same city at the same time. One usually kills the other.

Queen mother and queen daughter may, however, live peaceably together for some weeks; but mother-in-law and daughter-in-law, never.

When two queen bees start fighting they not only try to sting each other, but they will pull each other's hair in real woman fashion. The queen stings only a rival queen.

A queen-bee can lay her own weight of eggs in one day. She will lay, in the first two months in the spring, from 300 to 1000 eggs in a day; and in the next month, or just before the main honey flow, she may lay 2000 eggs a day. She can be the mother of 100,000 workers (undeveloped females) in one bee-hive. If the old bees did not die off at the age of a month or six weeks in the height of the honey flow she might have twice that number.

The same egg that will produce a queen will produce a worker-bee in 21 days. The larva of the worker-bee is fed a coarser food by the nurse bees in the hive and for that reason it is not developed into a perfect female like the queen and not so quickly. In this way the bees can of their own will produce either a queen-bee or a worker-bee from one and the same egg.

The Workers

The life of a worker-bee in the Northern States, where the winters are cold, may be six or eight months, extending over the less active season of the year — fall, winter and early spring. But a worker-bee hatched just at the honey-gathering season in summer is likely to wear out its wings and life in a few weeks in the intense work of filling the hive with honey. It often falls exhausted outside the hive and there dies. If it does not leave the hive the younger bees push it out of the hive as of no further use. If the old

bees attempt to go back the young ones without gratitude or conscience, pick them up, carry them on the wing perhaps half a mile and then drop them. They can't walk back. They can't fly back, and so they die.

The bees that gather the surplus crop of honey do not eat it. The bees that eat it did not gather it because the generations change so rapidly. But the colony lives on. The same rule applies in the human family.

The Drone

A drone, which is a male bee, has no father; but, strange to say, he always has a grandfather (a maternal grandfather). The queen-bee lays an unfertilized egg to produce a drone—a clear case of parthenogenesis, or virgin birth.

The drone-bee is not permitted by the worker-bees ever to live more than one summer season. He dies after mating with the queen, or is driven out of the city or killed by the worker-bees at the close of the honey-gathering season to save boarding him. He is a happy loafer, never working, always fed by others, a regular "man about town," until fall comes—and then suddenly nobody cares for father.

The drones are always killed off or starved by the bees themselves after the main honey flow unless the hive is queenless or has an unmated queen.

Bees to Carry a Pound of Honey

Actual weighings have shown that it takes about 20,000 bees to bring in a pound of nectar, which will make about one-fourth as much honey. It would, therefore, take 80,000 bees to bring in enough nectar, when evaporated and modified by bees, to equal a pound of honey. It has been estimated that it takes 80,000 more bees to evaporate and modify four pounds of nectar into honey. According to these figures it takes 160,000 bees to gather and prepare a pound of honey in a given period of a few hours or a day.

The average flying distance for a bee-load may be a mile and a half. If one bee could gather enough nectar (four pounds) to make one pound of honey it would have to make 80,000 trips of one mile each, or fly a distance equal to more than three times around the globe.

Why Honey in Place of Other Sweets

The sweet found in flowers is not honey, but similar to sweetened water. It is called nectar. Honey is the nectar of flowers, gathered, evaporated, and modified by bees.

Nectar, or the sweet as it is found in the flowers, is chemically the same as cane sugar, but when the bees store it in their combs and seal it over, it is converted into real honey, consisting of what is known as invert sugar, or about equal parts of levulose and dextrose, which means that it is in such a form that it can be absorbed without change in the human system.

Honey is much the same as the sugar that is found in most fruits. It contains, besides levulose and dextrose, mineral elements such as iron, lime, sodium, sulphur, magnesia, and phosphoric acid, so necessary to our human bodies.

Refined cane sugar has none of these elements; and if any of them were present originally they would be lost in refining. Before cane sugar can be absorbed into the human body it must be inverted by the digestive process into a sugar like honey. In other words, refined granulated sugar, unlike honey, must go through one process of digestion before it can be utilized by the human system.

The following was taken from "Bees for Beginners" issued by the Extension Service University of Massachusetts:

Life History of Honeybee

All bees pass through four distinct stages from egg to adult, i. e., egg, larva, pupa, adult. To the beekeeper the immature stages are grouped as follows:

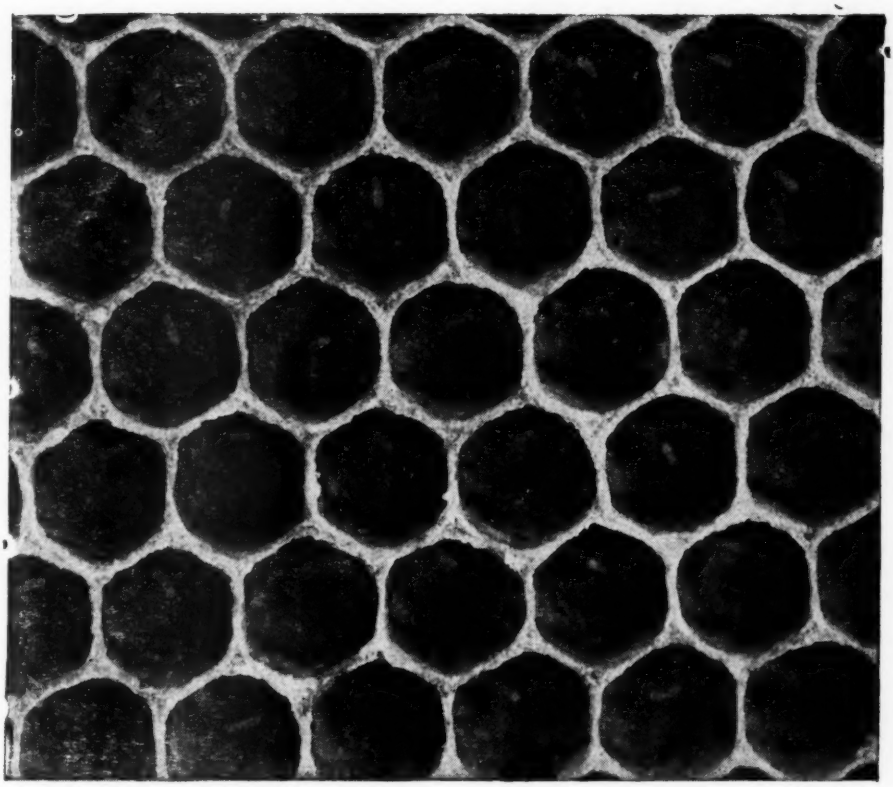
Unsealed brood — comprised of the egg and feeding larvae;

Sealed brood — comprised of the nonfeeding larvae, the pupae, and for a short period the adult.

The eggs are laid in the cells by the queen. Just before the eggs hatch, which occurs about seventy-two hours later, a nurse bee places a small amount of royal jelly in each cell. It is thought that the moisture from the royal jelly is necessary for the larva to break through the shell.

The young larva for the first 2 to 2½ days all receive the same food, royal jelly, a nutritous substance secreted by the pharyngeal glands of the adult bees. After this period there is a difference in the length of developmental stages. For that reason each caste will be considered apart.

Workers. During the first 2 to 2½ days the larvae are fed by a process known as mass feeding. During this time there is always an abundance of food available. After this period



Close view and greatly enlarged worker comb with eggs in the bottom of the cells. Some of the eggs stand at an angle.—Photo by E. F. Bigelow.

there is a change in composition of the food, a mixture of honey and pollen being substituted for the royal jelly, and a change in the method of feeding in that the larvae are given food as they need it. This is known as progressive feeding and lasts for 2½ to 3 days.

At the end of the feeding period, five days after hatching, the larvae are sealed in their cells by the workers. The larvae spend a period of approximately one day in spinning a cocoon. The larva becomes quiescent for two days, then sheds its skin (moults) and becomes a pupa.

During the pupal period the organs of the immature bees are broken down and those of the adult are formed. This requires eight to nine days. This period is followed by another moult. The adult bee remains in the cell for ½ to 1 day, then gnaws through the cell cap and crawls forth.

Queens. The larval period is one day less than that of the worker and the pupal stage requires four days less.

Drones. The larva requires three days more than does that of the worker. The pupal period is approximately the same length.

To summarize the length of life cycle, the following table is presented.

	Length of stage in days		
	Queen	Worker	Drone
Egg	3	3	3
Larva	7	8	11
Pupa	5	8½-9	8½-9
Adult emerges	1 day	½-1 day	½-1 day
Total days	16	20-21	23-24

For many years it was stated that 21 days were required for the development of a worker from egg to adult. Farrar in studies conducted at the University of Massachusetts showed that 95 percent of the bees emerged in 20 days rather than in 21 days.

The variation in length of developmental stages is probably due to the temperature within the brood nest.

Just News

The Pennsylvania State Beekeepers' Association will hold its annual meeting in the Farm Show Building, Room E, Harrisburg, on January 15 and 16. An unusually worth while program is being planned, which includes Dr. J. W. White, Jr., in charge of Honey Section, Biochemical Division, Eastern Regional Laboratory, Philadelphia, Pa. The beekeepers banquet will again be one of the big features. A cordial invitation to all.

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The **Cook-DuPage (Illinois) Beekeepers' Association** Annual Meeting with dinner at 6 P. M. will be held February 9th, 1952, beginning at 4 P. M. at the Masonic Hall, S. W. corner of 23rd St. and Millard Ave., Chicago (3600W). A colored motion picture of bees will be shown. Speeches, Music, Entertainment, and Turkey Dinner, $2.50 per plate.—A. J. Smith, Sec'y.

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The regular monthly meeting of the **St. Clair County Beekeepers' Association** was held Dec. 5th at Belleville, Ill. A good number of beekeepers attended. Several members from the agricultural class of the Belleville High School were present and took a great interest in discussions. The next meeting will be held at the County Highway building at Belleville on January 2, 1952, at 8:00 P. M. when election of officers for 1952 will take place and another interesting program is being planned. —Hankammer & Leiper, Program Committee.

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At the first annual meeting of the **Berkshire County (Massachusetts) Beekeepers' Association** on November 13, the following officers were elected for the ensuing year: President, Lindsay A. Whaley, Sheffield; Vice-President, Morgan G. Bulkeley, 3rd, Mt. Washington; Secretary-Treasurer, Edward L. Babb, Ashley Falls. Arno Werner of Pittsfield was appointed Librarian.—Ralph R. Ray, Sec'y.-Treas.

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The Committee for the Bee Exhibit at the New England Spring Flower Show which is to be held at the Massachusetts Charitable Mechanic Building in Boston on March 9th to 15th, 1952, inclusive under the Sponsorship of the Massachusetts Horticultural Society, was appointed as follows by President Baptiste: Chairman, A. K. Tinkham, will be assisted by John Furber, Chet Mc Innis, Maurice Hawks, C. H. Lothrup, Sam Fardy, and Jim Delory. The display will show the life and habits of the Italian honeybee and will be for the education of the tens of thousands of people that visit the show each year, and to impress upon them the importance of the honeybee in horticulture. The next regular meeting of the **Middlesex County Beekeepers' Association** is to be held at Waltham on January 26th, 1952, when plans for the show will be discussed. Any organization that has free literature to offer for distribution to the public at this spring show may send such material to the Chairman A. K. Tinkham, 11 Poplar Street, Belmont, Mass.—John H. Furber, Sec.-Treas.

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George W. Bohne, Luling, La., for many years a prominent beekeeper of that state, also a contributor to beekeeping journals, passed on December 4, 1951. Mr. Bohne will be remembered for his friendliness, his ability as a speaker at bee meetings, his ready wit, and the contribution he made to the beekeeping industry.

* * * * *

James H. Sprout of Lockport, New York passed away on November 17, after a brief illness. For years Mr. Sprout was a commercial operator of bees in Western New York. He was a charter member of the W. N. Y. Honey Producers' Association and served several years as its President. He was a believer in Co-operative marketing of honey and was an early member of the Finger Lakes Honey Producers Co-operative and continued that membership and support until his death. With advancing years he gradually reduced his number of colonies until he operated only a few hives at his home. He was a close student of bee behavior and was considered by all who knew him as one of the best beekeepers of his time.—Howard M. Myers.

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Massachusetts Federation of Beekeepers' Associations meeting to be held January 10, 1952 at Auditorium, Worcester, Mass.

9:30 A. M. Ten-minute papers by

Members of County Associations.

10:45 A. M. R. E. Newell, Franklin, Mass. "Problems and Management of Large Scale Fruit Pollination."

1:30 P. M. Business Meeting, Harold Bennett, Pres. Hampden County, presiding.

2:00 P. M. "Disease Control Thru Inspection". — Milo R. Bacon, Norfolk County Agricultural School, Walpole, Mass.

3:30 P. M. Colored Slides of Sojourn through the Middle-West. Ass't Prof. Frank R. Shaw, Univ. of Mass. Amherst, Mass.

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New Jersey Beekeepers' Association Annual Convention, January 31, 1952, Auditorium YWCA, 140 East Hanover Street, Trenton, N. J. Henry E. Neidengard, President, presiding.

10:00 A. M. President's Address.
Report of Sec.-Treas., Milton H. Stricker.
"Can We Influence Beekeepers' Prosperity".—E. C. Martin, Professor of Entomology, Michigan State College.

1:30 P. M. Election of Officers.
"Preparing Honey for Market". —E. C. Martin,
"Stump the Experts"—Membership Participation.
Report on the Honey Cookery Contest.
Report of Experiment Work—Prof. Robert S. Filmer, Assoc. Research Specialist in Entomology, N. J. Agricultural Experiment Station.
Report of Beekeeping Inspection Work—Paul L. Holcombe, Supervisor of Bee Culture, N. J. Department of Agriculture.

6:30 P. M. Dinner.

* * * * *

Kansas Beekeepers' Meeting, February 6, 1952, Room 102, Fairchild Hall. R. L. Parker, Professor of Apiculture, Kansas State College, and State Apiarist, presiding.

9:00 a. m. Report of Kansas Apiary Inspection— R. L. Parker.

9:15 a. m. Beekeeping in Central and Northwest Kansas—W. W. Franklin, Assistant Professor of Entomology, Kansas Agricultural Experiment Station, Hays, Kansas.

9:45 a. m. Present Status of the Sweet Clover Weevil in Kansas —Roger C. Smith, Head, Department of Entomology, Kansas State College.

10:30 a. m. Factors Contributing to Building Strong Colonies—G. H. Cale, Editor, American Bee Journal, and Manager, Dadant Apiaries, Hamilton, Illinois.

11:15 a. m. Kansas State Beekeepers' Association Objectives—M. C. Mitchell, President, Kansas State Beekeepers' Asso., Altoona, Kans.

Afternoon Session

M. C. Mitchell, President, Kansas State Beekeepers' Association, presiding.

1:00 p. m. Honey House Sanitation Problems—A. V. Small, Beekeeper and Honey Producer, Augusta, Kansas.

1:30 p. m. Round Table Discussion of Honey House Sanitation Problems—A. V. Small, G. H. Cale and R. L. Parker, Leaders.

2:00 p. m Agronomic Factors in Alfalfa Seed Production—C. O. Grandfield, Agronomist, Bureau of Plant Industry; Soils and Agricultural Engineering, U.S.D.A. and Department of Agronomy, K.S.C.

2:20 p. m. Honey Filters for Commercial and Sideline Beekeepers —G. H. Cale.

3:15 p. m. Alfalfa Pollination Problems in Central Kansas—W. W. Franklin.

* * * * *

Annual Farm and Home Week, University of Illinois, January 28-31, 1952.

Tuesday, January 29

9:00 The yearly cycle of the bee colony—V. G. Milum.

10:00 Hive essentials and construction demonstrations—(110 Vivarium)

11:00 The body structures of bees and how they work—V. G. Milum.

1.00 Illinois honey plants and beekeeping areas—Carl E. Killion.

1:45 The nature of honey and its care—V. G. Milum.

2:30 Demonstration of honey house equipment—(110 Vivarium)

Wednesday, January 30

8:00 Fall, winter, and early spring management of bees—V. G. Milum.

9:00 Late spring and summer management for production of extracted honey—G. H. Cale.

10:00 Production of section and bulk comb honey—Carl E. Killion

11:00 Management for pollination and seed production service—G. H. Cale.

(Continued on page 60)

Hall of State, Historical Museum, State Fair Grounds, Dallas Texas.
—Photo courtesy Dallas Chamber of Commerce.

On To Dallas

By Edw. A. Wolfe, of American Beekeeping Federation

A three-point program will be presented at the annual meeting of the American Beekeeping Federation at Dallas, Texas, on January 17-19, 1952, at the Baker Hotel. These points are research, marketing, and pollination. Over 20 speakers will be present to offer their thoughts on the various subjects and it is urged that everyone in the beekeeping industry make a special effort to attend.

The Apiary Inspectors of America will meet on January 16 and until noon of the 17th. Other meetings on this day will include those of the Executive Committee and the Board of Directors.

The general assembly will be called to order at 1:30 in the afternoon. A report of the Honey Utilization Committee by R. B. Willson will follow the President's address and report of the Secretary-Treasurer. Willson's report should be of interest to everyone.

Dr. J. W. White will report on recent results of research work with honey.

Chas. C. Hansen will explain the need and functions of the newly formed Bee Industries Research Foundation.

Following the afternoon adjournment, the nominations, resolutions, honey and Pollen Plants, Marketing, Research, and Honey Utilization committees will meet.

Evening activities will get under way at 8 o'clock. Mrs. Harriett Grace of the American Honey Institute will be the guest speaker at the meeting of the Ladies' Auxiliary, in addition to their regular business meeting.

The "500 Club" will hold its first meeting. Panels of men recognized for their knowledge will lead discussions of problems that are of particular importance to the larger operators.

There will also be a meeting of the honey packers with Raymond Fischer of Arkansas presiding. All honey packers, regardless of size, are urged to attend this meeting to seek a solution to the problems that affect this segment of our industry.

The greater part of the following day will be given over to the subjects of marketing and promoting honey. Howard Foster of California

Love Field is the nerve center for Dallas air center, one of the largest in the Western Hemisphere. Three air fields in Dallas schedule 222 arrivals and departures daily.

will discuss the functions of the marketing committee, and Mrs. Harriett Grace will tell of recent work in the American Honey Institute.

In accordance with a request from the Executive Committee, representatives from the field of promotion and advertising will present their proposals of what our industry can do to improve our market conditions.

The annual banquet will take place at the close of this day with Roy Grout acting as toastmaster.

The subject of pollination will take up the forenoon of the 19th. Recognized authorities will discuss all phases of this problem. Insecticides, cotton, sweet clover, vetch, and alfalfa will all be considered in a manner that should be of interest to every beekeeper.

You are not only invited but urged to attend this annual meeting.

[It is hoped that there may be a goodly attendance at this national annual meeting. We need to take time out, at least once a year, to properly appraise efforts being put forth by the various organizations in our industry. The meeting place is accessible from East and West. Those in the North will enjoy getting away from snow and ice for a spell.—Ed.]

Bees Illustrate Proverbs

By H. H. Root

Frequently we marvel at the skill and artistry shown in the making of old engravings. The labor required would discourage modern engravers, and the cost of pictures if they had to be produced in the same way today would be almost prohibitive.

In an old book published in Amsterdam about 300 years ago there are three engravings showing bees, —apparently to illustrate old precepts. Two Latin scholars had difficulty making literal translations of the scrolls. Loosely, the first seems to mean that everything has its point or mark of identification. Probably the sting was not referred to. The disproportionately large bees may be hitched to a wooden plow. If so, the well known industry of the bee is its mark of identification. Far fetched? Perhaps.

The scroll above the second illustration indicates that nothing is (fully) understood. Perhaps the artist had in mind the many actions of the bees not fully understood in the 16th century. If so, are we ever to fully understand all their movements today? Von Frisch's painstaking experiments are certainly along the line of delving into the unknown. We know a little but not much about the stratosphere a few miles high. We know less about the earth a few miles deep. Truly we know little about conditions except within ten miles of home—up and down.

If the scroll above the third engraving means that halfway measures are to be avoided we might guess that the bear sitting in water is only half protected. No doubt he would have preferred water deep enough to leave only his mouth and fore paws without protection. Using what he had available he protected his hind quarters leaving his front quarters and head for the purpose of getting and eating the honey.

It is a temptation to invent new titles for each illustration. First, the bee is all important in agriculture. Second, the beehive is a symbol of industry. Third, "Eat thou honey because it is good".

* * * * *

E. D. Gilliam dressed himself in a full colony of bees for a beard and offered kisses to any present at the Dallas County Beekeepers' Association Field Day last fall for a dollar each. There were no takers. —Photo sent by Fred Adams, and was originally used by Farm & Ranch magazine.

INTERNATIONAL CONFERENCE

(Continued from page 43)

would only slow down a little during the day, and tea permits this, there would not be so many comparatively young American men dropping off with heart failure at the age of 50 or thereabouts. We need to take it a little slower.

Thursday was another heavy program including papers by a Japanese, a Frenchman, a German, an Egyptian, a South African, and a Swiss. Only one of these addresses was given in the language of the speaker, the others were given in English, indicating the linguistic ability of people of other countries. It might be mentioned here the average European delves into scientific beekeeping more deeply than does the average American beekeeper. It is a poor beekeeper in Europe who does not have his own microscope and means for biological bee study. This scientific note accounts for the average type of paper given at the Congress. To give you some idea of the breadth of the subjects discussed the Thursday program included the following: "Different Causes of Sterility in the Queen Bee," "Some Investigations on the Biology of Acarapis Woodi", "The Effect of Nosema Apis in the Foraging Behavior and Brood Rearing Activity of a Colony of Honey Bees," and "A Micro-Organism that Apparently Attacks Acarapis Woodi." Thursday evening offered some relief to the heavy subjects to Conferees, and a theatre party was arranged to visit the Shakespeare Theatre at Stratford-on-the-Avon where Richard II was given.

The lectures on Friday dealt primarily on pollen, and the influence of pollen. The week-end covered a visit to Buckfastleigh Abbey in the south of England, where Brother Adam has his bees. This trip was again made by bus, leaving Leamington Saturday morning, arriving at Buckfastleigh Abbey that evening, where the visitors were put up at the local Agricultural College, supper being served by the College that evening. On the Sunday morning busses took the delegates back to Buckfastleigh Abbey where Brother Adam took them to his main queen rearing yard on the Moors of Dartmoor. As a matter of interest in passing, it might be said that on the cold bleak moors of Dartmoor is built one of the largest penal establishments in England, and on that particular week-end two prisoners escaped, but when one visits those moors on a rainy, cold, dismal day, one realizes the average prisoner escaping from Dartmoor has little chance of getting away. There are no houses in sight for miles, and one could easily be lost on the Moors. As the delegates drove to Brother Adam's queen yard, they met armed police looking for the escaped prisoners, who finally gave themselves up late Sunday evening, one dying from exposure soon after being apprehended by the police, and the other being in bad shape.

It was generally agreed that the Leamington meeting was one of the most successful International Conferences ever to be held and this success was due largely to the efforts of those who planned the meeting.

You will be pleased to know that a silent pause was observed during a busy day—a pause to the honor and in memory of Dr. Everett Franklin Phillips and Mr. Frank Pellett.

While it is impossible to know the thoughts in the minds of those beekeepers gathered from over 30 countries, who worked harmoniously to improve beekeeping throughout the world, it is not improbable that every delegate perhaps many times silently prayed that all men the world over might meet peacefully together to settle their mutual problems.

Beeswax for Musical Instruments

Beeswax is used to set and seal reed blocks in accordians, is also used for the same purpose in reed organs. In some older type pipe organs beeswax was used to seal pipes to reed blocks.

The reason beeswax is used;

1 - It will stand weather changes;
2 - It is very light, cutting down the weight of the instrument;
3 - Reed blocks can be easily changed for reason of broken reed or for tuning purposes;
4 - Beeswax stays soft and pliable making the instrument very easy to tune.

Frank Zucco, of the Falls Music Center, Cuyahoga Falls, Ohio.

The Illinois Meeting

Officers for 1952: Left to right, Wesley Osborn, Treasurer; R. O. Klebes, President, Hoyt Taylor, Secretary.

The 61st annual meeting of the Illinois State Beekeepers' Association, held in Springfield, November 9 and 10, had a fair attendance, although a heavy snowstorm with bad country roads interfered somewhat with normal attendance.

The meeting was called to order by **Ralph O. Klebes,** President.

Hoyt Taylor, Secretary, and editor of the Illinois State Beekeepers' Association Bulletin, reported an unusual interest in the bulletin which is issued each month. Many copies go to readers in foreign countries.

Wesley Osborn, Treasurer, expressed some concern for the future financial status of the Association, unless new members can be brought in and interest revived.

Carl E. Killion, Inspector of Apiaries, said that something should be done to stop the dwindling bee population of Illinois, which has apparently been due to (1) lack of honey plants, (2) low honey prices, (3) heavy winter losses, and (4) loss of bees due to indiscriminate application of insecticides.

Harold A. Kaeser, Superintendent of Markets, Illinois, mentioned that beekeeping is now in the Marketing Department, and this should result in more publicity for honey and increased honey sales. Mr. Kaeser stressed the importance of good quality honey, properly packaged for eye appeal, and the necessity of having enough honey on hand each year to guarantee a steady supply.

Dr. V. G. Milum, Apiarist, University of Illinois, gave a talk, "Just Browsing". He mentioned the importance of bumble bees for pollination of certain farm crops, also the attempts being made to propagate these insects. It has been found that they will nest in old flower pots and drain tiles properly placed to attract them.

Dr. Milum does not think that the bees in a winter cluster exchange places, that is, the bees on the outside or shell of the cluster do not exchange places periodically with those near the middle of the cluster. He stressed the importance of having an abundance of honey in combs above each winter cluster to avoid starvation.

Art Kehl, of the G. B. Lewis Company, Watertown, Wisconsin, conducted a class in honey selling in which the participants actually went through the different steps necessary in making a sale. The energy supplied to those who eat honey should be stressed. Enthusiasm for the product is needed to be successful in selling honey.

G. H. Cale, Editor of the American Bee Journal, gave a talk on bee

breeding and explained some of the techniques followed in producing hybrid bees. It is possible by continued selection and combining certain strains, to breed bees for various purposes and at the same time develop characteristics which are desirable.

Glenn O. Jones, Secretary of American Beekeeping Federation, talked on "How Organizations Serve" and mentioned the beginning and growth of the Federation, started in 1945. A Ladies' Auxiliary has recently been formed in Nebraska. Each member is to try to interest ten housewives in honey. This constitutes one of the requirements for membership. According to Mr. Jones, a national program for honey selling is to be presented at the national meeting in Dallas on January 16, 17, and 18.

The group enjoyed an excellent banquet, followed by a program of surprises and music, conducted by Mary Taylor, Hostess for the occasion.

Association officers elected for 1952 are R. O. Klebes, St. Charles, President; Hoyt Taylor, Pleasant Plains, Secretary, and Wesley Osborn, Hillsboro, Treasurer.—Jack Deyell.

Gives Beekeeping a Boost

Richard Livermore standing by one of his Fair displays.

Richard Livermore, of Belle Center, Ohio, is an enthusiastic young beekeeper. He started with bees in 1939 at Rochester, Ohio, and has been associated with such Ohio beekeepers as Emerson Long, St. Paris, Claude Mohrman, Wellington, and Harry Vandenberg of La Grange. He gives Henry Quirin, Bellevue, O., particular credit for starting him in queen rearing.

After two and a half years in the Navy in the last war, his love of bees was stronger than ever. Last spring he purchased the Strickler Bros. Bee Company at Belle Center, O., and has been engaged in commercial beekeeping, dividing his time in producing honey and queen rearing and preparing for organizing the new Logan County Beekeepers' Association. Mr. Livermore believes sincerely in the organization of beekeepers and young as he is, has already done more than his share in promoting such organizations.

Buy and Sell

Only responsible advertisers and honest advertisements will be admitted to these columns. References required from new advertisers not known to us. Rate: 15c per counted word, each insertion. Each initial, each word in names and addresses, the shortest word such as "a" and the longest word possible for the advertiser to use, as well as any number (regardless of how many figures in it), count as one word. Copy should be in by the 10th of the month preceding publication.

HONEY FOR SALE

WE BUY AND SELL all varieties of honey. Any quantity. Write us for best prices obtainable. The Hubbard Apiaries, Onsted, Michigan.

NEW CROP of honey shipped daily from producer in Florida. Pure orange blossom, 5 lbs., $2.25; Pure Florida cut comb honey, 5 lb. pail, $2.75. No C.O.D. orders. All shipments prepaid. E. R. Raley, Daytona Beach, Florida.

ANY GRADE—Any amount. Alexander Co., 819 Reynolds, Toledo, Ohio.

BUCKWHEAT HONEY in new 60-lb. cans, 10 cents per pound. E. G. Kyte, Fairview, Pa.

700 new 60's of delicious clover honey. Sample 20 cents. John Burghardt Apiaries, 1111 N. Franklin, New Ulm, Minn.

HONEY, WHITE, predominantly clover, strained and heated, ready for bottling. Good clean honey in new sixties, 16c per lb. 5 sixties or more, 15c per lb. FOB Louisville, Ky. Lose Brothers, Inc., 206 E. Jefferson St., Louisville, 2, Ky.

IOWA Honey, one can or truck loads. Russell D. Smalley, Beaver, Iowa.

AMBER, light amber and white honey in new 60 lb. cans. Norman Ellis, Caro, Michigan.

ORANGE, Palmetto, and Mangrove honey in new sixties. Peter W. Sowinski, Fort Pierce, Florida.

CLOVER extracted honey in sixties. Abram Brubaker, Lancaster, Pa., Rt. 1.

WHITE CLOVER COMB HONEY—In plastic boxes or window cartons. Frank H. Hauck, P. O. Box 84, Kew Gardens, N.Y.

We still have buckwheat comb honey for sale. Edgar Williams, Pierpont, Ohio.

NO. 1 SECTION White clover comb honey, $7.20 per case. Engle Apiaries, Kearneysville, W. Va.

FANCY GRADE tupelo gallberry chunk comb 2½ pound size any amount. A. V. Dowling, Valdosta, Ga.

STOLLER'S fancy clover honey in new sixties. Stoller Honey Farms, Latty, Ohio.

HONEY AND WAX WANTED

BEEKEEPERS TAKE NOTICE—We can not guarantee honey buyers' financial responsibility, and advise all beekeepers to sell for cash only or on COD terms except where the buyer has thoroughly established his credit with the seller.

CASH FOR YOUR HONEY—Light extracted or comb. Regular trade send sample. 60 lb. cans furnished if desired. W. R. Moomaw, Stone Creek, Ohio.

CASH FOR BEESWAX. Write as to quantity and we will quote price. Muench-Kreuzer Candle Co., Inc., Syracuse, N. Y.

HONEY WANTED—All grades and varieties. Highest cash prices paid. Mail samples. State quantity. HAMILTON & Company, 1360 Produce St., Los Angeles 21, California.

ALL GRADES HONEY AND WAX WANTED—Mail samples, advise quantity and cash prices delivered to us. HONEY SALES COMPANY, 1808 NO. WASHINGTON AVE., MINNEAPOLIS 11, MINN.

CARLOADS or less of honey and wax. Send sample and price. Alexander Company, 819 Reynolds, Toledo, Ohio.

WANTED — White and amber honey. Any amount. D. F. Treap, R. D. 3, Box 222, Kent, Ohio.

HONEY AND WAX WANTED — Mail sample. Advise quantity. BRYANT & SAWYER, 2425 Hunter St., Los Angeles 21, California.

BEFORE YOU SELL your clover honey contact us. Send samples and tell us how much you have. The Delaware White Clover Apiaries, 139 West William St., Delaware, Ohio.

WRITE FOR shipping tags and quotations on rendered beeswax. We buy from one pound up and if you have over 25 pounds let us work it into foundation for you at a 25 percent saving. Walter T. Kelley Co., Paducah, Kentucky.

CASH for your comb honey and all types extracted. Send sample and best price. Buckeye Honey Co., 3930 No. High St., Columbus 2, Ohio.

WANTED—EXTRACTED HONEY—Clover or light amber. C. H. Denny, Rt. 4, Ravenna, Ohio.

WANTED — All grades of honey, one can to a carload. Send sample, state price in first letter. We exchange sixty lb. cans. Cash on delivery. Honeymoon Products Co., Box 85, River Rouge 18, Mich.

HONEY at support price delivered our plant Chandler, Oklahoma. We hope you can sell it for more, if not, send sample to: Old Taylor Honey Co., Harlan, Iowa.

WANTED BUCKWHEAT, light amber, and white orange honey. Eastern Food Products, 115 Division Ave., Brooklyn, N.Y.

WANT all types of honey, especially light amber clover and goldenrod. Cloverdale Honey Co., Fredonia, N. Y.

FOR SALE

Standard 10-frame bee equipment for one or a thousand hives. Russell D. Smalley, Beaver, Iowa.

We carry a full line of ROOT QUALITY Bee Supplies. Prairie View Honey Co., 12303 12th St., Detroit 6, Mich.

WRITE FOR CATALOG — Quality Bee Supplies at factory prices. Prompt shipment. Satisfaction guaranteed. The Hubbard Apiaries, Manufacturers of Beekeepers' Supplies and Comb Foundation. Onsted, Mich.

The only comb foundation plant in the east. We sell foundation, work your wax, render combs and cappings. Robinson's Wax Works, R. D. 3, Auburn, N. Y.

BEE SUPPLIES of all kinds. Catalog free. Hodgson Bee Supplies, Ltd., 565—13th Ave., New Westminster, B. C., Canada.

YOUR WAX WORKED into quality medium brood foundation for 23c pound; 100 pounds, $18.00. Fred Peterson, Alden, Iowa.

THE BIGGEST BEE SUPPLY Catalog published (64 pages) free for the asking. Listing many items not found in other Catalogs. No agents—buy direct and save 20%. WALTER T. KELLEY CO., PADUCAH, KENTUCKY.

BEE SUPPLIES—Tin packages; 10 sizes glass jars; paper shipping supplies; window cartons and other items. Roscoe F. Wixson, Dundee, N. Y.

Three hundred colonies certified Italians, ten frame, two supers, good tupelo, titi, gallberry locations. Also three hundred mating boxes with combs. A. V. Dowling, Valdosta, Ga.

Three frame extractor; dripless bottle filler spigot. 1400 Weldon Place South, Baltimore 11, Md.

BUILD UP YOUR BEES with heat for the honey flow. Write for information and get the benefit from my experiments. George Adelhardt, 303 Johnson Ave., Libertyville, Ill.

BEES AND QUEENS FOR SALE

We use all possible care in accepting advertisements but we cannot be held responsible in case disease occurs among bees sold or if dissatisfaction occurs. We suggest that prospective buyers ask for certificate of inspection as a matter of precaution.

YANCEY HUSTLERS for 1952—Packages and Queens, ready April 1st. Three-band Italians, bred for business. Overweight packages; spring-reared queens; all guaranteed to please. Caney Valley Apiaries, 2500 Nichols Ave., Bay City, Texas.

HONEY WANTED
Carloads and less than carloads. Mail sample and best prices in all grades.
C. W. AEPPLER COMPANY
Oconomowoc, Wisconsin

Michigan Headquarters for
Root QUALITY
Bee Supplies
Complete Line of Bee Supplies and Honey Containers
Prompt Service
Michigan Bee and Farm Supply
510 N. Cedar St.
Box 7 Lansing, Michigan

Let us do your wax **rendering** and handle your wax at highest market prices and also **Mill** your **Wax** into **finest** quality **comb foundation.**
Schmidt Apiaries
Rt. 4, Bay City, Mich.

PROTECT YOUR FUTURE. BUY YOUR SAVINGS BONDS NOW.

HONEY LABELS
Improved designs, embodying color, balance, simplicity, and distinction. Please send for free samples & prices.
C. W. AEPPLER COMPANY
Oconomowoc, Wisconsin

ITALIAN BEES AND QUEENS for '52

With Queen	1 to 9	10 to 99	100-up
2 lb. pkg.	$2.75	$2.65	$2.50
3 lb. pkg.	3.70	3.60	3.45
Nice large Queens	.85	.75	.70

We guarantee you nice large 1952 queens and full weight packages. Order early for your preferred date.

Mitchell's Apiaries Bunkie, La.

1952 QUEEN BEES
3-Banded Italians
No Sulfa or other dope used
Queens raised on honey
Geo. W. Moore
Shasta, Shasta Co., California

PACKAGE BEES AND QUEENS
(Italians)
Let us plan with you for 1952
The Wilbanks Apiaries
Claxton, Georgia

Better Hurry for those personally reared Caucasian Queens and Package Bees.
Howard Weaver
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Gray Caucasians
Reliable and Prompt Service
Write for Prices
Bolling Bee Co. Bolling, Ala.

Good Italian Queens in Season
White Pine Bee Farms
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BEES FOR SALE AND LEASE—Montana, Wyoming, Idaho, Nebraska. Contact Bradshaw & Sons, Wendell, Idaho.

CAUCASIANS—Booking orders for 1952. Lewis & Tillery Bee Co., Route 1, Box 280, Greenville, Ala.

YELLOW ITALIAN QUEENS. Package bees. Satisfaction guaranteed. O. E. Brown, Route 1, Asheboro, N. C.

GREEN'S PROFIT PRODUCING Italian queens will please you. My 25 years' experience is your safe guard. If you want a better hive of bees, get a better queen. Start shipping about March first. Price, 90c each. After June first, 50c each. Cash before shipping dates. D. P. Green, De Land, Fla., R. 2, Phone 512M.

SEEDS

NOTICE—Our 1952 Honey Plant, Shrub, and Tree catalog being unchanged since last year, will not be mailed unless requested by you. Those wishing to order can use last year's catalog, prices being same. New item list on request. NICOLLET COUNTY NURSERY, St. Peter, Minnesota.

HONEY PLANTS. New 1952 catalog on request. Everflowering Locust trees; some new forage crops; attractive perennials, some for naturalizing; unusual new plants. Of 50 good honey plants featured—you can use for large area or small. Pellett Gardens, Atlantic, Iowa.

HELP WANTED

Man to operate outyards in the South for package bees. Must be honest, sober, able to assume responsibility, and good worker. State age, experience, wages expected. All replys confidential. Reply Box 4, care of Gleanings, Medina, Ohio.

WANTED capable experienced beekeeper. Must give reference. Living quarters furnished. Good salary and a permanent position. Farr, 4851 Raddock Road Fond Hill, Cincinnati, Ohio.

HELP WANTED; Experienced and inexperienced. Best wages, excellent opportunity. Furnished rooms for suitable man with family and steady job for qualified. M. E. Ballard, Roxbury, N. Y.

HELP WANTED—Skilled and semi-skilled package-bee and queen-rearing help in our extensive operations. No boozers need apply. We have good bees and good equipment to work with. State qualifications. Wages commensurate with experience and ability. Jensen's Apiaries, Macon, Miss.

WANTED: Beeman. Must also be experienced truck driver. Good wages plus bonus. C. H. Schader, Sunnyside, Washington.

MAN for 1952 package season with possibility of operating bees on shares for honey crop, if capable. Experience in package business not necessary but helps. Write Rt. 3, Box 3696, Auburn, Calif.

MAGAZINES

WESTERN CANADA BEEKEEPER—Official organ of the Manitoba Beekeepers' Association. One year, $1.50; two years, $2.25; three years, $3.00. In combination with Gleanings in Bee Culture, $2.75. 211 Affleck Bldg., Winnipeg Canada.

THE BEE WORLD, international and scientific journal on bees and beekeeping, with apiculture abstracts. Monthly, including membership in the Apis c'ub, $1.75 per annum. Specimen copy 12c U. S. postage stamps, from The Secretary, The Way's End, Foxton, Royston, Herts, England.

Read the South African Bee Journal. Published every two months. Subscription 7/6 per year to the Treasurer, P. O. Box 3306, Cape Town, South Africa.

Know interesting facts concerning the bees of India through the INDIAN BEE JOURNAL, published in English by the Bhupen Apiaries (Himalayas), Ramgarrh, Dist. Naini Tal, U. P., India, or available through them. Subs. Rs7/ or 10 shillings or 2.25 dollars per annum. Single copy, Rs ¼s. 1/9 or 40 cents (International Money Order). Payment in mint postage stamps of your country accepted.

MISCELLANEOUS WANTED

WANTED—Root 8-frame reversible extractor, any condition. M. Melvin, Celoron, N. Y.

ANGORA GOATS

INTERESTED in Angora Goats? Read the Sheep and Goat Raiser, Hotel Cactus, San Angelo, Texas, the only ranch magazine published serving the Angora Goat industry. Subscription, $1.00; sample copy, fifteen cents.

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About bees and queens for 1952

J. F. McVay

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Starline or regular Italian packages and queens.

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Write for Prices.

Sunkist Bee Co. Convent, La.

Northern California Package Bees and Queens

Will accept some honey in exchange for packages

F. E. Morrison

Rt. 3, Box 3696, Auburn, Calif.

BEES and QUEENS

1952

W. E. PLANT

Hattiesburg, Rt. 2, Miss.

PROTECT YOUR FUTURE. BUY YOUR SAVINGS BONDS NOW.

JENSEN'S

BEES & QUEENS

Again in 1952

For many years we have sought ways and means of producing "BETTER BEES". More recently we have played an active role in testing work of the American Bee Breeders' Association. We have, and are continuing to take part in organizational work through support of State and National Associations looking to closer co-ordination of all segments of the bee industry.

One branch of beekeeping cannot be prosperous without affecting other branches directly or indirectly. None can stand alone. Let us unite in a common effort to put dignity into our profession. It is up to us to establish our own pattern; the Government, or no other agency can do it for us.

For too long, many have sat idly by doing nothing constructive, but, contrariwise, complaining of everything going to the bow-wows. The time has come for us to decide whether we sink or sail. Let us unite all our efforts for the LONG PULL ahead.

Extending to one and all
The Season's Greetings.

JENSEN'S APIARIES

Macon, Miss.

"The business QUALITY BUILT"

Queens Our Specialty

Italian, Caucasian, and Carniolans

Three Isolated Mating Yards to Prevent Mixing Breeds

ITALIANS ..... $1.00 each
Caucasians ..... 1.10 each
Carniolans ..... 1.25 each

Shipments start Feb. 20, 1952.

All Queens shipped by Air Mail and guaranteed to please.

Walter D. Leverette Apiaries

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BRIGHT 3-BANDED

1952

Italian Bees and Queens

For 1952, we want your business and you want quality bees and queens, plus service. Write us before placing a definite order. We are 30-year Shippers.

NORMAN BROS. APIARIES
Ramer, Ala.

HAPPY NEW YEAR!

Now is a good time to plan for next season, also a good time to place your order for **PACKAGE BEES** and **Queens.** **STOVERS** have spent many years supplying you with **SUPERIOR BEES** and will make every effort to do so in the future.

Book Your Order Now — No Deposit Required
Prices Will Be Announced Shortly

Caucasians **Italians**

The Stover Apiaries

Mayhew, Miss.

JUST NEWS

(Continued from page 49)

1:00 What race and strain of bees should we use—G. H. Cale.
1:45 Diagnosing brood diseases and their control—Carl E. Killion
2:20 Comb pests and adult bee diseases—V. G. Milum.

The above is the two-day program of beekeeping subjects but visitors may attend other sessions from January 28-31, on farming including Agricultural Engineering, Agronomy and Soil Conservation, Live Stock Production and Marketing, Dairy Production and Marketing, Farm Management, Rural Organization, Forestry, Cooking and other phases of home making.

There are no registration fees or other expenses except for transportation, board, and room. Thousands attend each year. For complete information address request to Information Office, College of Agriculture, Urbana, Illinois.

A Correction

Referring to the report on the Indiana meeting in the December Gleanings, page 760, the percentage of diseases in Indiana in 1950 should be 3.19 instead of 6.6.

BEE LINES TO THE EDITOR

(Continued from page 4)

"If I had a stock of combs, I should weigh a lot of them to check up on this; or I would cut out several pieces of approximately the same size, measure the exact thickness, and find out for myself just how much such extracting combs do vary in weight—but I have none worth while.

"This could be made quite a scientific test by weighing and measuring, say 25 pieces, and listing the exact weights per square or rather per cubic inch. Old brood combs might also be included. Could you not have some one of your men do the job and give us accurate information?

"I imagine that there are others besides myself who would appreciate this information. It would be something for the book, some day." —E. L. S., Calif.

* * * * *

"Well, I can ask some of the darndest questions—and often get one between my Adam's apple and my out-apiary.

(See next page)

THE FIDDLING BEEKEEPER

(Continued from page 17)

thickness to insure a rich tone. If too little varnish is applied the instrument will lack that rich, mellow quality prevalent in the famous violins.

Work on the violins is usually completed during the winter months when it is necessary to share shop time with repairs on beekeeping. This craftsman, however, turns out a violin in three weeks of steady work and has little trouble in profitably disposing of them. The writer marvels at the amount of hand work that goes into a Chrysler violin, so there is obviously little time for idleness between bees and violins. On the next occasion that George plays a violin in the honey house, I will know that he is testing a work of art, and not merely fiddling his time away.

BEE LINES TO THE EDITOR

(Continued from previous page)

"How many years will it take a feller to break even—buy hives, foundation, and bees to start now? Don't try to answer. It sure is a great help to those that are in the game to just read 'Gleanings'.

"One time I had lumbago. Well, I took to handling bees and soon after I took a few hypedermic pokes, some in the East and some in the West, I got rid of that old lumbago. I've got bees yet and eat about a frame of honey sometimes. No, sir, I wouldn't strain the truth if I had a 200 pound strain. My bees are funny—they never put up honey when I am packing (lazy bees).

"Anyway I got rid of the lumbago, now if I ruin my hay fever eating honey, that will be cheap medicine. I guess I won't have any trouble selling my cut comb as they all want it at the price of extracted.

"It's best not to have someone tell how nice things are when way back in your way of thinking you don't think so."—Buz-Buz.

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Gentlest of all races, prolific, fine workers. Queens from here — South Florida—March 1st on. Also a limited number of 2-lb. and 3-lb. packages. Glad to have your inquiries about EARLY queens and packages.

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Best Quality Italians Only.

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2 lb. pkg. with queen	$3.00
3 lb. pkg. with queen	3.80
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Queen	1.00

10% discount on 25 packages or more. For comb packages, add $1.10 per comb.

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Gleanings in Bee Culture

BEEKEEPING IN CYPRUS

(Continued from page 15)

foulbrood on the Island, although it exists in neighboring countries.

(2) They are laborious, and when there is abundant nectar they can gather surprisingly large quantities per day.

(3) They defend themselves very effectively against insect enemies.

(4) According to the French professor Gillett, the Cyprian bees have a longer proboscis than any other race. I do not know how reliable this information is, but I hope that some day we will have more definite figures on this interesting question.

(5) They are easy to inspect as they do not crowd together on the comb like the Italians. They remain spread so that the queen can be found in a short period of time.

These are their good qualities. On the other side of the ledger is their viciousness. I should also mention their tendency to raise a great number of queen cells. I have counted 32 naturally built queen cells on a single comb, while Dr. C. C. Miller in 1905 succeeded in raising 119 queen cells on two combs of brood in a colony. This may be a desirable quality in queen rearing, but undesirable in commercial honey production. However, shade and ample space for storage reduces the swarming problem to a minimum. During an average season only six percent of our colonies swarm.

These are some of the facts about the Cyprian bees. I hope that some day, through selective breeding and proper crossings with other races, a new strain may be produced that will have most of the good qualities of the Cyprian bees.

John M. Davis Strain Italian Queens

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$1.25	$1.20

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1952 will be a good year for those who are ready, and purchase the best stock of bees. Our Better Bred Stock is among the best; has proven its merits for years. Let us book your order at the following prices:

	Queens	2-lb. pkg. with qn.	3-lb. pkg. with qn.
1 to 24	$1.20	$3.75	$4.75
24 to 100	1.10	3.50	4.50
100 up	1.00	3.25	4.25

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